

Florida Uniform
Examination
 Questions

In the Branches Required for
First, Second and Third Grade Certificates
For the Years
1894, 1895, 1896, 1897, 1898, 1899, June, 1900

Compiled and Published by

O. L. Strickland,

Palatka, Florida.

1900.



Florida Uniform
Examination
 Questions

In the Branches Required for

First, Second and Third Grade Certificates

For the Years

1894, 1895, 1896, 1897, 1898, 1899, June, 1900

Compiled and Published by

O. L. Strickland,

Palatka, Florida.

1900.

Copy 2

LB 1763
F6 S6

44567

Library of Congress
TWO COPIES RECEIVED
SEP 7 1900
Copyright entry
July 11, 1900
No. *A. 17067*
FIRST COPY.
2nd Copy Delivered to
ORDER DIVISION
SEP 10 1900

COPYRIGHTED, 1900,
By O. L. STRICKLAND,

ALB Jan 14

FLORIDA UNIFORM EXAMINATION QUESTIONS.

SEPTEMBER, 1894.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. (a) What is spelling? (b) Define alphabetical equivalents.
2. (a) State the advantages of oral spelling; (b) written spelling.
3. What is meant by word analysis?
4. Syllabicate, mark the primary accent, and give proper diacritical mark to each vowel in the following words: *lenient, lamentable, strata, mercantile, phraseology.*
5. Give five nouns, underlining the suffix in each, the suffixes meaning respectively: *act of, to make, one who, pertaining to, state of being.*
6. What is the distinction between the phonic and the orthographic spelling of words?
7. Use a prefix with each of the following words, and show how the meaning is changed: *print, fair, modest, sight, rate.*
8. (a) What are the words called that sound alike, but are spelled differently? (b) That are not alike but mean nearly the same?
9. Spell and define each of the following words and two others, having the same sound as each one: *write, road, raise, seen, sight.*
10. Spell correctly each of the following: *silinder, embarrass, privaleage, sintillate, thur-o, slite, preferrable, catapiller, camfeene, sarjent.*

READING.

[First, Second or Third Grade Certificate.]

1. (a) What is reading? (b) Define articulation. (c) Give an error in articulation.
2. (a) What is emphasis? (b) Mention three ways of using it.
3. (a) Is there a difference in *quantity of tone* and *pitch of voice* in reading? (b) Explain your answer.
4. What drills do you give pupils as to: (a) Position of body? (b) Holding of book? (c) Breathing? (d) Gesture? (e) Facial expression?

5. How would you conduct a reading lesson in a large class, looking to (a) Correcting errors, (b) Naturalness, (c) Mastery?

6-10. Read an extract of ten lines each of prose and poetry for your examiner.

(Examiner will grade from 0 to 25 each extract read and deliver same to the Grading Committee to be added by them to the grading of the questions above.)

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. (a) What was the Declaration of Independence? (b) Who was its author?

2. Explain the allusion in "Charter Oak."

3. (a) Give date of Andrew Jackson's administration.

(b) Name two important political questions settled.

4. What was the principal issue on which Polk was elected President?

5. (a) Who enunciated the "Monroe doctrine"? (b) What was it?

6. What five men, afterwards celebrated in history, first came into notice during the Mexican War?

7. What was the "era of good feeling," and who was President?

8. (a) How did the United States get Florida?

(b) Who was the first governor after it became a State?

9. Couple the names of the inventors with what you consider the five greatest American inventions.

10. Name five great battles of the Civil War, and tell which side was victorious in each.

UNITED STATES HISTORY.

[First Grade Certificate.]

1. Name three of the chief advantages to be derived from the study of history.

2. Into what periods would you divide United States History?

3. Relate briefly the causes which led to the struggle for Independence.

4. Give a brief account of two of the most decisive battles of that struggle.

5. (a) What gave rise to the war of 1812? (b) Name some results following that war.

6. (a) Name five important acquisitions of territory. (b) Who was President when each was acquired? (c) Tell what led to the acquisition in each case.

7. Give a brief history of political parties from Washington to Cleveland.

8. Give the principal features of President Lincoln's inaugural address.

9. (a) Trace briefly the financial history of this country. (b) What of the "wild cat" banks? (c) Panics of 1837 and 1873? (d) What seems to be the present financial policy?

10. What of the growth in *art*, *science*, literature and education in the past half century?

ARITHMETIC.

[Second or Third Grade Certificate.]

1. (a) At 27 bushels an acre, how many bushels of wheat will be harvested from 640 acres? (b) Which is the multiplicand in this example, and why?

2. If division is a short way of performing many subtractions: (a) What in division corresponds to the subtrahend? (b) What to the minuend?

3. Given the divisor 99, the quotient 909, and the remainder 9, what is the dividend?

4. Resolve 31570 into five prime factors.

5. What is the quotient of the least common multiple of 16, 20, 24 and 30 divided by the greatest common divisor of 2373 and 6667?

$$6. \quad \frac{\frac{4}{3} + \frac{5}{12}}{3\frac{1}{7} - 1\frac{3}{14}} \div 4\frac{5}{9} \text{ of } \frac{1}{3} = ?$$

$$7. \quad (1260 \times 3.49) \div 1.047 - 88.62 \div .00211 = ?$$

8. A tin box 11 inches long, 7 inches wide, and 3 inches thick will hold how many gills?

9. T. F. McBeath bought for \$2 an acre the $W\frac{1}{2}$ of $NE\frac{1}{4}$, the $S\frac{1}{2}$ of $NW\frac{1}{4}$, the $NW\frac{1}{4}$ of $SE\frac{1}{4}$, and $NE\frac{1}{4}$ of $SW\frac{1}{4}$ of a section of land; he sold the $NW\frac{1}{4}$ of $NE\frac{1}{4}$ at \$2.50 an acre, the $SW\frac{1}{4}$ of $NE\frac{1}{4}$ at \$3 an acre, the $SW\frac{1}{4}$ of $NW\frac{1}{4}$ at \$1.20 an acre, the $SE\frac{1}{4}$ of $NW\frac{1}{4}$ at \$2 an acre, the $W\frac{1}{2}$ of $NE\frac{1}{4}$ of $SW\frac{1}{4}$ at \$5 an acre, the $E\frac{1}{2}$ of $NW\frac{1}{4}$ of $SE\frac{1}{4}$ at \$4 an acre: (a) How much land did he buy? (b) How much did he sell? (c) What is the description of what he now owns? (d) Besides clearing the land he now owns, what per cent. did he make on his speculation?

10. How long must \$1,301.64 be on interest to amount to \$1,522.92 at 5 per cent.?

ARITHMETIC.

[First Grade Certificate.]

1. A boy, after spending $\frac{1}{4}$ of his money for candy and $\frac{1}{6}$ for lollipops, found that 20 cents was $\frac{2}{7}$ of what remained. How much money had he?

2. If 14 bushels of rice cost \$1.50, what will 7 bushels cost?

3. (a) Prove that a cubic foot is approximately .8 of a bushel. (b) Also that a bushel is nearly $1\frac{1}{4}$ cubic feet.

4. The property of Gainesville is valued at \$2,300,000. How many mills tax would have to be levied for one year to pay for a brick school house costing \$9,120, if there were 200 polls paying \$2 each, and the collector's commission on both polls and property tax was 5 per cent.?

5. Divide \$5,376 among three heirs proportionately to $1\frac{2}{3}$, $1\frac{11}{15}$, $2\frac{1}{5}$.

6. What per cent. is made by a druggist who buys medicine at \$5 a pound avoirdupois weight and sells it at 48 cents an ounce apothecaries' weight?

7. Find the difference between the true and the bank discount on a non-interest bearing note for \$6,285 for 9 months and 15 days, money being worth 6 per cent.

8. If six men dig a cellar 22.5 feet long, $17\frac{3}{10}$ feet wide, 10 feet 3 inches deep, in 3 days of 10 hours and 15 minutes each, how many men will it require to dig another in 12 days of 8.2 hours each, 45 feet long, $34\frac{3}{8}$ feet wide, and 12.3 feet deep?

9. What will be the length of a line that will exactly reach from the lower corner to a diagonally opposite upper corner of a cubical room that contains 1,905,624 cubic feet of space?

10. At a franc a square foot, what will it cost in U. S. money to tin a conical church steeple whose perpendicular height is 40 feet and its base 18 feet? Ans. \$223.73+

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. Name and define five properties of nouns.

2. Write the possessive case, plural number, of *it*, *which*, *cupful*, *son-in-law*, *Knight-templar*.

3. (a) Which parts of speech are declined? (b) Which are compared? (c) Which are conjugated? (d) Decline *son-in-law*.

4. Give the rule applying and compare each of the following: *bad*, *handsome*, *lovely*, *polite*, *beautiful*.

5. Give the principal parts of the following verbs: *dive*, *say*, *drink*, *eat*, *gird*, *cling*, *set*, *shoe*, *lie* (to recline), *lay*.

6. (a) Give all the properties of the verb. (b) Tell how the passive voice is formed.

7. Give synopsis of the verb *see* with *he* through all tenses of the indicative mood.

8-9. Analyze or diagram: "When a man dies, they who survive him ask what property he has left behind."

10. Parse in the above sentence: *when*, *they*, *who*, *what*, *ask*.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. (a) What is meant by inflection? (b) The derivation of words? (c) Distinguish between etymology and syntax.

2. Name and form the plurals of five nouns each by a different rule.

3. Classify sentences (a) as to form, (b) as to use.

4. Define (a) a phrase; (b) a clause. (c) Tell when each may be called an adjective element; (d) an adverbial element.

5. Analyze:

"Beyond the darkening ocean burned
The bloody sunset's embers,
While the Crimean valleys learned
How English love remembers."

6-7. Diagram according to Reed & Kellogg or Harvey the above sentence.

8. Parse in full in the above sentence: *Beyond, darkening, bloody, burned, while, Crimean, how, remembers, embers, sunset's.*

9-10. State what principles of grammar are violated in each of the following sentences:

(a) Every man and every woman esteem their own best.

(b) Trust not him whom you know is dishonest.

(c) If we study we will learn.

(d) These kind are best.

(e) Such expressions sound harshly.

GEOGRAPHY.

[Second or Third Grade Certificate.]

1. (a) How many degrees of the earth's longitude correspond to one hour of time? (b) Explain.

2. Start at New Orleans and sail up the Mississippi to St. Paul and name in order (a) the States you would see, (b) the cities, (c) the industries.

3. (a) Name five peninsulas on the coast of North America. (b) Locate them.

4. (a) Name the countries of South America. (b) Name their capitals. (c) Tell what form of government each has.

5. (a) Name the islands known as the Greater Antilles. (b) Name the chief city of each.

6. (a) What is the greatest longitude a place can have? (b) What the greatest latitude? (c) Explain each.

7. (a) What two rivers divide Florida into three great sections? (b) Name all the counties in the section in which you take the examination.

8. (a) Name the railroad systems of Florida. (b) Approximately how many miles in the State?

9-10. Locate the following cities: Jacksonville, Key West, Pensacola, Tampa.

GEOGRAPHY.

[First Grade Certificate.]

1. Define the axis of the earth.
2. Name five zones and give the width of each in degrees.
3. (a) What nation controls the Suez canal? (b) What waters does it connect?
4. Starting from Chicago, and traveling entirely by water, on what waters would you sail in order to reach Vienna?
5. (a) Name the countries crossed by the 40th parallel of north latitude. (b) Begin on the west coast of the United States and name in order going east the states crossed by it.
6. (a) Where are the dykes found? (b) Why were they built?
7. Name ten valuable articles of commerce exported from Africa.
8. (a) Name five countries of Europe bordering on the Mediterranean sea. (b) Give capitals of each.
9. Compare the animal life of Europe and America.
10. (a) Name the six largest cities of Europe. (b) Locate each.

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. (a) What is the use of the paragraph in composition? (b) Illustrate.
2. (a) Name the different parts of a letter. (b) How should each be punctuated?
3. (a) What is meant by *outlining a subject*? (b) Make an outline of the following subject: A Day at a Picnic.
4. (a) Name five figures of speech. (b) Illustrate each with a short sentence.
5. (a) How would you rank letter writing in importance among the various forms of composition? (b) At what stage of the pupil's education would you teach letter writing?
- 6-7. Write a short letter to a County Superintendent applying for a school. State your age, experience in teaching, educational advantages, your late reading on teaching as a science, salary you expect, and name two persons as references as to your character and success as a teacher. Be careful about the beginning and closing of your letter.
- 8-10. Outline your subject with not less than five heads and write an essay of not less than 100 and not over 200 words on one of the following subjects:
 - (a) The Recent Strike.

(b) Teachers Summer Schools.

(c) The Press of the Present Day.

NOTE.—Punctuation, capitalization, spelling, paragraphing, style and subject matter each to be considered in grading the last question.

PHYSIOLOGY.

[Second or Third Grade Certificate.]

1. (a) What are the offices of the skeleton? (b) Name and locate the bones of the upper body.
2. (a) What is the composition of bone? (b) Explain how a fractured bone repairs itself.
3. Describe muscles as to their (a) arrangement; (b) covering; (c) most wonderful property.
4. Name the divisions of the alimentary canal.
5. What would you do in case of a deep flesh wound that was bleeding profusely?
6. (a) What is done to the blood in the lungs? (b) Why not breathe air a second time?
7. (a) Why is the skin called an excretory organ? (b) Explain its functions.
8. Describe the brain as to (a) shape; (b) size; (c) ratio of white and gray matter.
- 9-10. Explain the digestion of a piece of fat meat, telling what bodily want it supplies.

PHYSIOLOGY.

[First Grade Certificate.]

1. Define (a) physiology; (b) anatomy; (c) hygiene; (d) ossification; (e) assimilation.
2. Name and describe the parts of the hip joint.
3. (a) What is the cause of soreness after violent exercise? (b) What will be the effect, physiologically speaking, of bathing and rubbing at such times?
4. What parts of the body require the following: (a) albumen; (b) lime; (c) iron?
5. Begin with the left auricle and trace the circulation of the blood through the system, naming the valves, chambers, tubes and organs through which it passes.
6. (a) Name the excretory organs. (b) Explain the functions of each.
7. (a) Describe the nervous system. (b) Show its connection with psychology.
8. Is the "sense of touch" a special sense, as compared with the other senses?
9. What effect has alcohol on (a) the heart? (b) the stomach? (c) the capillaries? (d) the brain?
10. How would you explain the evil effects of (a) re-breathing? (b) rapid eating? (c) tobacco?

THEORY AND PRACTICE.

[Second or Third Grade Certificate.]

1. What is the real purpose of education?
2. What is the purpose of recitation?
3. (a) Give necessary qualifications in a teacher to secure the best results from recitations. (b) How do you economize time in a recitation?
4. Name the requisites in a teacher to secure good government.
5. Discuss oral instruction: (a) its use; (b) its abuse.
6. What is the difference in *telling* a thing and in *teaching* it?
7. (a) What is the synthetic method of teaching? (b) The analytic? (c) Which is more applicable to primary instruction, and why?
8. What do you understand by the educational maxim: "Proceed from the known to the unknown"?
- 9-10. Have you attended a Teachers' Summer School this year?

THEORY AND PRACTICE.

[First Grade Certificate.]

1. (a) Of what advantage to the teacher is a knowledge of Psychology? (b) History of Education?
2. (a) Define education as a science. (b) Give four fundamental principles to be observed in teaching.
3. When and to what extent should teaching be objective?
4. What is meant by the following faculties: (a) presentative; (b) representative; (c) elaborative?
5. When do you think the pupil should begin the study of abstract subjects?
6. (a) What is attention? (b) Its relation to educational operation?
7. Explain the analytic and synthetic processes, and explain their relative value with the teacher.
8. (a) Should the teacher's course of study be *pari passu* with his pupils? (b) What should it be?
9. Name incentives to study: (a) proper; (b) improper. Modes of punishment: (c) proper; (d) improper.
10. Have you attended a Teachers' Summer School this year?

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. What is the object of introducing civil government into the course of study?
2. (a) Name the law-making powers of a State. (b) Explain three processes necessary to make a law.

3. (a) What is the advantage of having a legislative body divided into two branches? (b) And what is the wisdom of the third process before a bill can become law?

4. How may a bill which has been vetoed become a law?

5. (a) Name three county officers and define their duties. (b) What legal requirements must they comply with before entering upon their duties?

6. What legal requirement must teachers comply with before entering upon their duties?

7. Name five duties of a teacher, as prescribed by law.

8. Describe the Australian ballot system.

9. (a) What are the three departments of government?

(b) What officers represent each in a county?

10. (a) What conditions must a teacher comply with before being entitled to his last month's salary? (b) How often, and to whom, must the county superintendent report? (c) How and by whom is the county school fund apportioned? (d) Who has the appointment of teachers; then what is the legal mode of procedure to obtain a school? (e) Should a vacancy occur in the office of county superintendent, by whom and how would it be filled?

ALGEBRA.

[First Grade Certificate.]

1. (a) What is algebra? (b) Define symbols; (c) equation. (d) On what does the degree of an equation depend?

2. Resolve $a^8 - b^8$ into its prime factors.

3. Divide $5xy + x^3 + y^3 - 1$ by $y + x - 1$.

4. (a) Prove that $(x+y)^0 = 1$. (b) Prove that $a^{-3} = \frac{1}{a^3}$

5. Reduce $\frac{a^{-1} b^{-2} c^3 m^n}{a^2 b^{-3} c^{-1} m^{-n}}$ to an equivalent fraction having positive exponents.

6. Find the greatest common divisor of $x^3 + 7x^2 - x - 7$, $x^3 + 5x^2 - x - 5$ and $x^2 - 2x + 1$.

7. Find the value of x in the equation, $5x - \frac{1}{2}(x+3) = 14$.

8. Required the number of two figures, which added to the number obtained by changing the place of the digits gives 77; and subtracted from it leaves 27.

9. Solve the equation $\frac{x+1}{x-1} = \frac{4x-3}{x+9}$

10. A certain farm is a rectangle, whose length is twice its breadth. If it should be enlarged 20 rods in length, and $2\frac{1}{2}$ rods in breadth, its area would be doubled. How many acres in the farm?

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. (a) In what respect is the earth like a magnet? (b) What and where are the magnetic poles? (c) What is meant by the "line of no variation?"

2. (a) Give three evidences of the internal heat of the earth. (b) Describe the formation of a volcano; (c) a geyser.

3. (a) What is a plateau? (b) Name some of the plateau regions of the earth with their distinctive features.

4. (a) What hemisphere has most land? (b) In which is the highest civilization, and why?

5. (a) What is the accepted theory as to the formation of mountains? (b) Compare the perpendicular reliefs of Europe and Africa.

6. (a) What is a valley? (b) a canon? (c) When are valleys transverse? (d) When longitudinal?

7. (a) Give the theory of tides. (b) Draw a diagram illustrating spring and neap tides.

8. (a) How are islands classified? Describe: (b) Continental islands; (c) oceanic; (d) volcanic.

9. (a) What determines the range of plant and animal life? (b) Industries of man?

10. How is the saltness of the sea accounted for?

OCTOBER 16, 1894.

[SPECIAL.]

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Illustrate with words all the diacritical marks of the vowel *o*.

2. (a) What is meant by the syllabication of words? (b) Separate the following into their syllables and mark the accented syllable: *Leniency, indefensible, lamentation, obligatory, vehement*.

3. (a) Define a primitive word; (b) a derivative word; (c) a compound word. (d) Form a derivative and a compound word with *man*.

4. How are words designated as to the number of their syllables?

5. Form and define a word with each of the following prefixes: *un, dis, be, ante, en*.

6. Form and define an adjective with each of the following suffixes: *er, ish, ible, ous, en*.

7. Give the rule for spelling the second of each of the following pairs of words: *bog, boggy; note, noting; begin, beginner; victory, victorious; daisy, daisies*.

8. Give the reasons for spelling the second word in each of the following pairs of words: *change, changeable; shoe, shoeing; hate, hateful; prefer, preference; singe, singeing*.

9. Write and define a homonym corresponding to each of the following words: *one, beau, rye, chair, holy*.

10. Correct the following words spelled phonetically: *kon-shens, kon-ker, kre-a-ta-b'l, men-azh-e-ry, paj-ant-ry, rek-wi-zish-un, Llas-fe-my, am-a-tur, lik-wi-date, suf-fish-ent*.

READING.

[First, Second or Third Grade Certificate.]

1. (a) What constitutes good reading? (b) Name three pre-requisites to the correct reading of a selection.

2. Give some special directions for the reading of poetry.

3. How, and in what respect, are punctuation points a guide to correct reading?

4. What method of teaching primary reading do you employ? Why?

5. What do you understand by rhetorical pauses?

6-10. Read selection given by examiner.

UNITED STATES HISTORY.

[First, Second or Third Grade Certificate.]

1. Into how many, and what periods, does United States history divide itself?

2. (a) Give the history of the Whig party. (b) What were some of its principles?

3. Describe the battle of Shiloh, giving important results.

4. What is meant by (a) a protective tariff? (b) tariff for revenue? (c) free trade? (d) internal revenue? (e) civil service?

5. How did the United States acquire (a) Texas? (b) Florida? (c) Kentucky? (d) Arkansas? (e) Oregon?

6. Why are the following places historic: (a) Montgomery, Ala.? (b) Fortress Monroe? (c) Appomattox? (d) Philadelphia? (e) Hampton Roads?

7. (a) What was the Monroe doctrine? and (b) when, if ever, has the United States government officially endorsed it?

8. Who was (a) Daniel Boone? (b) General Custer (c) Kit Carson? (d) "Captain Jack"? (e) John Brown?

9. What were the causes leading to the war of 1812?
 10. Mention five events of the present year of historic significance. Why?

ARITHMETIC.

[Second or Third Grade Certificate.]

1. The quotient is \$76, the remainder \$64, the dividend \$56,000, what is the divisor?
2. What are the five prime factors of 10010?
3. A, B, and C have respectively \$630, \$1,134, and \$1,386, with which they agree to purchase horses at the highest price per head that will allow each man to invest all his money. How many horses can each man buy?
4. What is the smallest number of bushels of wheat that will fill an even number of boxes, whether they hold 36, 48, 80, 320 or 432 bushels?
5. If $2\frac{1}{3}$ acres of land cost \$7 $\frac{2}{3}$, how many acres can be bought for \$65 $\frac{5}{7}$?
6. $(1.26 \times 34.9 \div .1047) - (88.62 \div .211) = ?$
7. Add 525 sq. l., 9 $\frac{1}{2}$ p., 9 $\frac{1}{100}$ sq. ch., and $\frac{1}{8}$ sq. mi., and find the exact number of acres.
8. If a box is 4 by 5 feet at the bottom, how high must it be to hold exactly 48 bushels, when 1 $\frac{1}{4}$ cubic feet is counted as a bushel?
9. What was the gain or loss per cent. on the transaction, when two horses were sold for \$99 each; on the sale of which there was a loss of 10 per cent. on one and a gain of 10 per cent. on the other?

10. \$500. Tallahassee, January 2, 1893.

Three months after date I promise to pay J. B. Doe, or order, five hundred dollars, with interest from date at the rate of 8 per cent. per annum till paid. For value received.

W. N. SLOWPAY.

Payments endorsed as follows: July 4, 1893, \$220 $\frac{2}{3}$; Dec. 4, 1893, \$10; June 24, 1894, \$12; Sept. 16, 1894, \$206.80. What will satisfy the note Oct. 16, 1894?

ARITHMETIC.

[First Grade Certificate.]

1. Simplify $\frac{17\frac{5}{12} - 9\frac{3}{4} - 4\frac{5}{7}}{\frac{5}{9} \times 9\frac{2}{7}}$

2. Divide 375 by .75, and .75 by 375, and find the sum and the difference of the quotients.
3. A tradesman marks his goods at 25 per cent. above cost, and deducts 12 per cent. of the amount of a customer's bill. for cash; what per cent. does he make?
4. What sum of money at 6 per cent. annually compounded interest, will amount to \$2,703 in 1 year, 4 months?

5. A, B and C formed a partnership, and cleared \$12,000. A put in \$8,000 for 4 months, and then added \$2,000 for 6 months; B put in \$16,000 for 3 months, and then withdrawing half his capital, continued the remainder 5 months longer; C put in \$13,500 for 7 months. How divide the profit?

6. A man lost $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{2}{5}$ of his money, and then had \$2,600 left; what sum had he originally, and how much per cent. had he lost?

7. Extract the cube root of 30.625, correct to three decimal places.

8. When it is 10 o'clock in Boston what time is it in Jacksonville, the longitude of Boston being $71^{\circ} 7' 45''$ W. from Greenwich, that of Jacksonville being $81^{\circ} 47' 50''$?

9. Sold a house for \$5,000 and thereby gained 20 per cent. Should I have have gained or lost, and how much per cent., if I had sold it for \$4,000?

10. What is the difference between the true and bank discount of \$250, due 10 months hence, at 7 per cent.?

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. Name the eight parts of speech.
2. How may you tell the part of speech of any word?
3. What parts of speech have inflection?
4. Decline (a) *which*, (b) *thou*, (c) *man-servant*.
5. Give the possessive case, singular and plural, of Mussulman, madam, fly, Knight-Templar, staff.
6. Give the past tense and past participle of the verbs *flee*, *fly*, *lie* (to recline), *lay*, *sit*, *set*, *bereave*, *dream*, *cl the*, *go*.
7. O, *that is doing just what I wanted you to do!* Parse the words italicized.

8-9. Analyze, by diagram or otherwise, the sentence: "If you have built castles in the air, your work need not be lost; that is where they should be; put foundations under them."

10. Correct the following, giving reason for each correction:

- (a) I fear I will not pass the examination.
- (b) Please learn me how to study.
- (c) Somebody told me, I forgot who.
- (d) What signifies promise without performance.
- (e) Every examinee may keep their questions.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. (a) How are sentences classified? (b) Give the classification of phrases.

2. Write the plural of the following: *Handful*, *son-in-law*, *Jones*, *chimney*, *fireman*, *larva*, *Knight-Templar*, *Mr.* and *3*.

3. Give the synopsis of *drop* through all the tenses of the indicative mood, passive voice, using *my grade* as the subject.

4. Illustrate by sentences the uses of *what*: (a) as an interjection; (b) an adjective; (c) pronoun; (d) adverb.

5. Parse the words in italics in the following sentence: "Near to the bank of the river *o'ershadowed* by oaks, from whose branches garlands of Spanish moss and the mystic mistletoe *flaunted*, such as the Druids cut down with golden hatchets at Yule-tide *stood*, *secluded* and still, the house of the herdsman."

6. Select the propositions in the above and tell which are principal and which subordinate.

7. Make a list of the prepositions with their terms of relation.

8. Make a list of the adjectives in the sentence and compare them if any admit of it.

9. Diagram or analyze the sentence according to Harvey or Reed & Kellogg.

10. Parse all the thats in the sentence: That that that that that boy parsed is not that that that that teacher told him to parse, is plain.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. What and where is Corea?

2. (a) What constitutes the empire of Japan? (b) what is its capital? (c) its population? (d) the principal exports? (e) and what can you say of the character of the people?

3. (a) Bound the Chinese empire; name (b) its principal rivers; (c) neighboring waters; (d) important cities; (e) and chief exports.

4. Name and locate all large bodies of water lying either in or around North America.

5. Name the two most southern continental capes of each hemisphere.

6. Locate the following and tell what each is: (a) Suez; (b) Bogota; (c) Dnieper; (d) St. Elias; (e) Blanco.

7. (a) What is the nearest distance in statute miles between two places on the equator situated respectively in longitude 137° E., and longitude 175° W.? (b) When it is Thursday noon at the former, what is the day and hour at the latter?

8. What advantage to commerce would the cutting of the Panama canal afford?

9. Describe the Mississippi and its value to the United States.

10. At what stage of the pupil's advancement, and how, would you begin the teaching of geography?

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. Give three rules for the use of the (a) period, and (b) explain the use of double and also of single quotation points.

2. (a) What is the purpose of capital letters? (b) Give three rules for their use.

3. Give three rules for choice of words.

4. Give rule for the placing of modifiers.

5. Name the essentials of a well-written composition.

6. Write a composition not exceeding 200 words on one of the following subjects:

1. How to Teach Reading.

2. The Pleasures of Country School Teaching.

3. How to Succeed as a Teacher.

Neatness 10

Spelling and Grammar 5 each

Style 10

Thought 10

Choice of words and arrangement.. 5 each

PHYSIOLOGY.

[First, Second or Third Grade Certificate.]

1. What change in the blood takes place in (a) the lungs? (b) the capillaries?

2. (a) What is a gland? (b) Name three of the largest glands in the human body?

3. Name and describe the fluids that enter into the process of digestion.

4. Why is rapid eating injurious to health?

5. (a) What is meant by decussation of nerves? and (b) where does this take place?

6. (a) How would you determine as to whether an artery or a vein had been cut? (b) If in a limb, how would you proceed in each case?

7. (a) How would you proceed in case one of your pupils fractured a limb? (b) How would you distinguish between a sprain and a fracture, and what would you do in case of a severe sprain?

8. To what class of organs does the skin belong, and what is its special function?

9. Why are bright pupils generally very fond of active outdoor games?

10. Why should little children be given frequent "recesses"?

THEORY AND PRACTICE.

[First, Second or Third Grade Certificate.]

1. Distinguish between a *lesson* and a *recitation*.
2. Give five fundamental principles of teaching.
3. Distinguish between *to instruct*, *to teach*, *to educate*.
4. Where and to what extent should object teaching be employed in arithmetic.
5. Name in order of their greatest relative activity the principal mental powers.
6. How many recitations a day should a child in the Third Reader grade have, and in what studies?
7. To what extent should the teacher assist pupils in the preparation of lessons?
8. Should prizes, honor marks, etc., ever be used as incentives to study or good conduct? Give reasons for your answer.
9. What daily preparation on the part of the teacher is essential to good teaching?
10. What works bearing on the subject of teaching or education have you read since last October.

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. (a) What is the reason for having two houses of Congress? (b) Why chosen differently and for different periods?
2. What sovereign powers have the individual States of the Union?
3. What is meant by (a) an *ex post facto* law? (b) bill of attainder? (c) writ of *habeas corpus*? (d) "the right to bear arms"? (e) what constitutional provision with regard to each?
4. (a) What was the purpose in giving the President the veto power? (b) Why was it not made final?
5. What kind of bills can originate from the House of Representatives only? Why?
6. How are members of the Supreme Court of the United States chosen, and for what length of term?
7. How are members of the Supreme Court of Florida chosen, and for what length of term?
8. How many grades of certificates issued from the Department of Education in this State, and on what conditions?
9. What constitutes the county school fund, and for what may it be disbursed?
10. What school funds are distributed from the State Treasurer's office, and on what basis is the apportionment made.

ALGEBRA.

[First Grade Certificate.]

1. Find the G. C. D. of $5x^3y^2+10x^2y^3+5xy^4$, and $ax^3y-axy^3+x^3y-xy^4$.
2. Write the factors of $x^{-2}-y^{-2}$; and $x-y$.
3. Required the sum, difference, product and quotient of $\frac{a+b}{a-b}$ and $\frac{a-b}{a+b}$
4. Show that $x^{-m} = \frac{1}{x^m}$
5. Write the equations whose roots are -7 and $+5$.
6. Find by factoring the value of x in the equations, $x^2-mx=mn-nx$.
7. Find the value of x in equation, $5x-\frac{1}{2}(x+3)=14$.
8. $\frac{1}{x}+\frac{1}{y}=5$, and $\frac{1}{x}-\frac{1}{y}=1$. Find x and y .
9. Find the values of x in equation, $mx^2+nx=pq$.
10. If a certain young lady were as many months older as she is inches in height, she would be 25; but if she were taller by $\frac{1}{10}$ as many inches as she is months old, she would be 7 feet high. Required her age and height.

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. What is the thickness of the earth's crust?
2. What elements mainly compose it?
3. What reason for believing some connection exists between volcanoes and earthquakes?
4. On what does the amount of water in a basin depend?
5. Account for the numerous lakes in Florida, and the sweetness and clearness of their waters.
6. What causes the phosphorescence of the sea?
7. To what three classes of ocean currents does difference of temperature give rise?
8. (a) What is a waterspout? (b) a cyclone? (c) a tornado? (d) What is meant by the *center* of a cyclone? (e) Why do the cyclones originating in the West Indies move northward?
9. Where are the largest rainless districts of the globe and why are these regions rainless?
10. What modifications of climate do the earth's motions produce?

MAY, 1895.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Illustrate with words all the diacritical marks of the vowel u.

2. Syllabicate, mark the primary accent, and give each vowel its proper diacritical mark in the following words: *Leniency, lamentable, coadjutor, vehemency, hygiene.*

3. Give and define a homonym to each of the following: *Sucker, marshal, collar, assent, sweet.*

4. Form and define a word with each of the following prefixes: *Mis, ad, dis, anti, extra.*

5. Form a word, and define the derivative, by adding a suffix meaning: *One to whom, without, somewhat, fold, office of.*

6. Name the suffix and give its meaning in the following words: *Divisible, doubtful, waspish, shorten, globule.*

7. Add the suffixes *en, ness, ist, able, ence* to the following words in order, and give rule for spelling the derivative: *Glad, dainty, copy, service, defer.*

8. Discriminate between the following synonyms: *Bring and fetch, indolent and lazy, economy and parsimony, doctrine and precept.*

9-10. Spell correctly the following: *Fleesy, flimzy, kolera, retrieve, zar, absess, skollop, bronkitis, sla (a vehicle for traveling on snow), likoris, precede, seperation, session (a yielding), rubarb, privalege, pedagog, effishensy, desizion, enuff, striknin.*

READING.

[First, Second or Third Grade Certificate.]

(EXAMINER WILL SELECT FROM A FIFTH READER.)

1. Read a paragraph of prose..... 1 to 50
2. Read an extract of poetry..... 1 to 50

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. What was the basis of the English claim to America?

2. Whence and why did the Puritans come to America?

3. What was the Monroe doctrine?

4. Name one Spanish, one Dutch, one English and two French explorers of North America, and state where each made his explorations.

5. Name five acts of the British government that tended to precipitate the Revolutionary war.

6. What practice was inaugurated by Jackson when he became President?

7. (a) What caused the rupture between President Tyler and his party? (b) Between President Johnson and his party?

8. Describe the battle of Gettysburg, and name the prominent commanders in each army.

9. Why was there one, and what was the United States Electoral Commission?

10. Name several important historical events that have occurred during the past four years.

UNITED STATES HISTORY.

[First Grade Certificate.]

1. Tell of all the important acquisitions of territory from other countries to the United States.

2. Give causes, immediate and remote, that led to the Civil war.

3. (a) Who was DeSoto, and what became of him? (b) When and by whom was St. Augustine founded?

4. State accurately the doctrines of the Republican party concerning slavery when first victorious.

5. Mention the names of five inventors prominent in American history, with a brief statement concerning each.

6. Explain what is meant by the "Geneva Award" and the "Alabama Claims."

7. Sketch briefly the acquisition of Florida by the United States.

8. Name five of the most important public measures that have claimed the attention of Congress during the administrations of Presidents Harrison and Cleveland (last term.)

9. What do you aim to accomplish for your pupils by the study of history?

10. Give a brief outline of your method of teaching history, and of hearing a history lesson.

ARITHMETIC.

[Second or Third Grade Certificate.]

 In the solution of problems, every process must be indicated—mere answers will not be accepted.

1. (a) Express in figures: Twenty-nine billion, ninety-five thousand, forty-five; (b) in words, 20,200,010,010; (c) by Roman notation, 605; (d) by Arabic notation, MDL; (e) in words, 625 625.

2. Write in the form of an equation, using the proper signs, what each of the three terms in subtraction, the three in multiplication, and the four in division, equals.

3. A has four tracts of land containing, respectively 360, 288, 648 and 720 acres. He wants to divide them into

the largest possible farms of equal size, dividing each into an exact number. (a) How many acres can he put into a farm? (b) How many farms will he have?

4. Multiply together the sum, the difference, the product, and the quotient of $\frac{5}{8}$ and $\frac{1}{3}$, (consider $\frac{1}{3}$ as the divisor.)

5. In how many days will A, B and C together do a piece of work, which A can do alone in 3 days, B in 5 days, and C in 6 days?

6. Divide fifty millionths by six hundred twenty-five ten-thousandths and express the answer in words.

7. Reduce $\frac{9}{16}$ of a rod to the decimal of a mile and write the answer in words.

8. How much less will it cost to fence 40 acres in the form of a square than in the form of a rectangle with its length four times the breadth, the price being \$2.50 a rod?

9. Sold two lots for \$200 each, gaining 20 per cent on one and losing 20 per cent. on the other. Did I gain or lose, and what per cent. on the transaction?

10. If 5 horses eat as much as 6 cows, and 8 horses and 12 cows eat 12 tons of hay in 40 days, how much hay will be needed to keep 7 horses and 15 cows 65 days?

ARITHMETIC.

[First Grade Certificate.]

 In the solution of problems, every process must be indicated—mere answers will not be accepted.

1. (a) What part of a yard is the smallest piece of silk from which an exact number of quilt pieces containing 4, 9, 16, 24, or 36 square inches may be cut? (b) How many pieces containing 24 square inches may be cut out of the silk?

2. Multiply 625 by .003 and divide the product by the square root of 39.0625, and write your answer in words.

3. It is 10 minutes past 1 p. m. where A is; it is 20 minutes before 9 a. m. where B is; (a) which direction is B from A? (b) How far are they apart, supposing a degree to be 50 miles on their latitude?

4. A well 3 feet in diameter and 12 feet deep, will contain how many gallons of water?

5. How many bushels will fill exactly level full a wheat house 12 feet long, 10 feet wide, and 6 feet high on one side and 8 feet high on the other, counting $1\frac{1}{4}$ cubic feet to a bushel?

6. A merchant marks cloth at \$2 a yard, so that he may drop 10 per cent. and yet gain 20 per cent. Find cost price.

7. What is the profit in buying opium at 75 cents an ounce, avoirdupois, and selling it at \$1 an ounce, troy?

8. If a cannon ball 3 inches in diameter weighs 10 lbs., what will one 8 inches in diameter weigh?

9. At what price should 4 per cent. bonds be bought (brokerage $\frac{1}{4}$ of 1 per cent.) to yield an income of 5 per cent?

10. If a ladder standing perpendicularly just reaching the top of a wall 30 feet high, had its base drawn out 18 feet from the wall, how far was the upper end from the top of the wall?

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. Write on each and explain the elements of (a) simple sentence; (b) complex sentence; (c) compound sentence.

2. Write the plurals of the following: *Prospectus, court-martial, man-servant, gas, syllabus, money, spoonful, aid-de-camp, madam.*

3. Write the possessive singular and plural of *man, brother-in-law, country, he, enemy.*

4. (a) What parts of speech are inflected? (b) Give the terminal inflections and precise use of each.

5. Compare *good, polite, ill, much, handsome.*

6. Give the principal parts of *lie, lay, set, sit, sing, rise, know, bear (bring forth), raise, fly.*

7. Write the synopsis in the passive voice of the verb *hear* with *thou* in both the indicative and subjunctive moods.

8. Analyze or diagram: We teachers, being constantly associated with children, become hermits while fitting others for society.

9. Parse in the sentence above *in full*, all nouns, pronouns, verbs and participles.

10. In the sentence, "Whoever is deceived thereby is not wise," parse *whoever* in full.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. Write the possessive plural of *ox, child, fox, mouse, hero, which, it, Mr. Brown, Mrs. Smith, Knight-Templar.*

2. (a) Give two general rules for the comparison of adjectives. (b) Compare and give reason for so comparing each: *Thin, clever, wooden, merry, nigh, ample, grey, universal, shy, beautiful.*

3. Make a table of pronouns, give first the class, then group into two adjacent columns those of each class used as nouns, or used as adjectives.

4. Write a short sentence illustrating: (a) an intransitive verb used as transitive; (b) a transitive verb used intransitively; (c) a verb with incomplete predication; (d) an impersonal verb; (e) show that transitive verbs only admit of a passive use.

5. Write the inflection in the present and past tenses in both the indicative and subjunctive moods of the verb (a) *to be*, (b) *to steal*.

6. Write the perfect participle of *be*, *hope*, *split*, *sew*, *sow*, *freeze*, *fly*, *tread*, *seek*, *sit*.

7. Give complete analysis of the following:

“Breathes there the man with soul so dead?

Who never to himself hath said,

‘This is my own, my native land!’”

8. Diagram, according to Harvey or Reed & Kellogg, the above sentence.

9. Parse, in full, *he*, *who*, *first*, *taught* and *what* in the sentence: “He who first taught the principles of Christianity knew well what would be the consequences.”

10. Parse *what* in each of the following: (a) Pay what you owe. (b) What pleases you? (c) What vessel is that? (d) What with entreaty, what with threatening, I succeeded. (e) What! is thy servant a dog?

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Define the following: Promontory, peninsula, inlet, sound, strait.

2. Locate and describe Japan as to its size, physical features, population and industries.

3. (a) Bound Korea. (b) Describe the country. (c) What of the number and character of its people? (d) What of its products and industries?

4. (a) Define latitude and longitude. (b) Is the length of a degree of longitude greater in Florida or Michigan? (c) Why?

5. (a) Show the relation between the physical and political conditions of a country. (b) Show how the physical features determine the industries, commerce and routes of trade.

6. Describe the German empire, telling (a) of the number of States composing it; (b) name the four largest; (c) character of the people; (d) chief industries and manufactured products. (e) What of her educational system?

7. (a) Describe the situation and shape of Mexico. (b) What is said of its shores? (c) What of its surface, people and form of government?

8. What of the size, physical features, people, products, and government of Cuba?

9. Draw a diagram of a township, sub-divide the sixteenth section into quar-quarters, and locate thus (x) a school house in the sw¹₄ of ne¹₄.

10. (a) Into what three great sections is Florida naturally divided by two large rivers? (b) Name all the counties in the section in which you take the examination.

COMPOSITION.

[Second or Third Grade Certificate.]

1. Write an essay of not less than 200 words, giving special attention to diction, capitalization and punctuation, on one of the following subjects:

- (a) Present Educational Tendencies.
- (b) The Ideal School Teacher.
- (c) The Value of Daily Composition in Schools.

(The Grading Committee will mark the composition, according to value of thought and correctness, from 1 to 100.)

COMPOSITION.

[First Grade Certificate.]

1. Write an essay of not less than 200 nor more than 300 words, giving especial attention to capitalization, punctuation, diction and style, on one of the following subjects:

- (a) Corporal Punishment in Schools.
- (b) Best Mode of Examining Teachers.
- (c) Benefits of Teachers' Associations.

PHYSIOLOGY.

[First, Second or Third Grade Certificate.]

- 1. Locate the metacarpal bones and give their number.
- 2. Name three offices of the skin.
- 3. Describe the human skeleton, giving the number, classification, structure and composition of the bones.
- 4. Explain how blood circulates through the bones.
- 5. Name and describe the organs of circulation.
- 6. Name the principal organs and describe the process of respiration.
- 7. (a) Name the organs of digestion; (b) the digestive fluids and the kind of food upon which each acts.
- 8. Name five articles of food rich in albumen.
- 9. Discuss the influence of climate in determining the kind of food the people require.
- 10. What effect has alcohol (a) upon the blood? (b) nerves? (c) brain? (d) Name three narcotics and describe their effects upon the human body.

THEORY AND PRACTICE.

[First, Second or Third Grade Certificate.]

1. When the lesson is not well learned for today, would you give it over again for tomorrow? Give reason for your answer.

2. Why are language and arithmetic two of the most important school studies?

3. (a) Should the teacher ever experiment, or simply be content to do as some one else has done? (b) All the best methods of instruction have been found out, haven't they?

4. Why, and in what way, should the teacher make daily preparation for school work?

5. (a) What is the purpose of a recitation? (b) Tell the difference between a recitation and a lesson.

6. How many recitations a day should a child in the Fourth Reader have, and in what studies?

7. How are vacancies in the following offices filled in this State? (a) State Superintendent; (b) County Superintendent; (c) School Board; (d) Supervisor or Trustee; (e) Assistant Teacher.

8. Define the duties of a teacher under the laws in this State.

9. Give some of the powers and duties of County Superintendents.

10. What is the purpose of education? (a) From a political standpoint? (b) From a personal standpoint? (c) From an ethical standpoint?

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. What are the Constitutional requirements (a) for a President? (b) Senator? (c) Representative?

2. (a) How many States had to give assent before the Constitution of the United States was adopted? (b) What proportion must ratify an amendment before it becomes the law? (c) Would an amendment be binding on a State voting against its ratification?

3. (a) How would a Vice-President be elected, if no one received a majority of the electoral college? (b) Has one ever been elected in that way?

4. (a) What constitutes treason? (b) How punished?

5. Mention five important personal rights guaranteed by the Constitution of the United States.

6. (a) Name three prohibitions on Congress; (b) three on the States.

7. Name the elective State officers of Florida, and give length of term and salary of each.

8. Explain how the State Constitution may be amended without holding a Constitutional Convention.

9. (a) Explain the "Reciprocity Clause" in the "McKinley Bill." (b) Give the main features of the "Australian Ballot System."

10. (a) Upon what basis is public school fund now apportioned by the State? (b) What are the limits of school age? (c) For what causes may a County Superintendent annul a teacher's certificate? (d) When a certifi-

cate is unjustly annulled or withheld by a County Superintendent, what remedy has a teacher? (e) Name and locate the State educational institutions.

ALGEBRA.

[First Grade Certificate.]

1. Resolve $x^6 - y^6$ into four factors.
2. Expand $(2a+2b)^4$ by the binomial theorem.
3. Resolve $x-2x^3+x^5$ into five prime factors.
4. Prove that $\frac{-a^3}{-a} = a^2$
5. Given $\frac{x}{5} + 3 = \frac{x}{4} - \frac{x-2}{5}$ to find x.
6. Find the value of x in the equation, $x^2 + 2x - 44 + \sqrt{x^2 + 2x - 44} = 42$.
7. $x^{\frac{2}{3}} + 3x^{\frac{1}{3}} = 10$, to find values of x.
8. A boatman who can row 12 miles an hour in still water, is 7 hours in rowing to a certain point up the river, and 5 hours in returning. At what rate per hour does the river flow?
9. Given $x^3 + y^3 = 189$, and $x + y = 9$, to find the values of x and y.
10. Solve $2\sqrt{x} + \sqrt{4x + \sqrt{7x+2}} = 1$; and $\frac{x + \sqrt{x^2 - 9}}{x - \sqrt{x^2 - 9}} = (x-2)^3$.

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. Why is there no dew on cloudy nights?
2. Why is it that California has its rainy season in the winter, and Florida in the summer?
3. Describe and account for the difference in climate between the east and west coasts of the United States.
4. What climatic influence does a high mountain or a chain of mountains exert upon the surrounding country?
5. Why are the tops of mountains colder than the valleys or plains at their bases?
6. (a) What family of plants is the largest contributor to human needs and comforts? (b) Show how.
7. Why are some regions of Western United States comparatively rainless?
8. What effect upon the climate, soil and surface of a country does cutting away its forests produce?
9. Define and account for artesian wells.
10. Describe the barometer and its uses.

SEPTEMBER, 1895.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Define letter, syllable, word, root, affix, and give an example of each.

2. Indicate by the use of the proper diacritical marks the pronunciation of the following words: cage, has, ink, cent, her.

3. Syllabicate and accentuate the following words: preferable, mischievous, deficit, irreparable, dolorous.

4. Give the meaning of each of the following prefixes, and illustrate by defining a word formed with each: un, pre, se, syn, meta.

5. Define homonym. Write and define each of the following, and one or more homonyms for each: ascent, council, rain, metal.

6. Define synonym. Illustrate the correct use of each of the following, and one synonym for each: danger, genius, poverty, protect.

7. Separate the following words into root and affix, give the original meaning of the root, and show its relation to the given word: submit, coincidence, intention, conspiracy.

8. To certain roots join the proper prefixes or suffixes in order to form derivatives signifying: (a) to go before; (b) to lead forth; (c) to make worthy; (d) to send away; (e) written by hand.

9. To the words *busy*, *traffic*, *conceal*, *fury*, *trace*, join the suffixes *ly*, *ing*, *ed*, *ous*, *able*, respectively, and give the rule for spelling the derivatives thus formed.

10. Correct the spelling of the following: scizers, dizolve, fude, tung, ofis, diferance, simetry, cappillary, seperible, descission.

READING.

[First, Second or Third Grade Certificate.]

1. (a) What is reading? (b) Define articulation. (c) Give an error in articulation.

2. (a) What is emphasis? (b) Mention three ways of using it.

3. (a) Is there a difference in *quantity of tone* and *pitch of voice* in reading? (b) Explain your answer.

4. What drills do you give pupils as to: (a) position of body? (b) holding of book? (c) breathing? (d) gesture? (e) facial expression?

5. How would you conduct a reading lesson in a large class, looking to: (a) correcting errors? (b) naturalness? (c) mastery?

6-10. Read an extract of ten lines each of prose and poetry for your examiner.

(Examiner will grade from 0 to 25 each extract read and deliver same to the Grading Committee to be added by them to the grading of the questions above.)

UNITED STATES HISTORY.

[First, Second or Third Grade Certificate.]

1. (a) What portions of America were claimed by the English, Dutch, French and Spanish, and upon what did each base its claim to such territory? (b) Give name and date of the first settlement by each.

2. Give a brief account of: (a) Champlain's voyages and discoveries; (b) Hernando DeSoto's explorations.

3. (a) Group the colonies according to the kind of government under which they were ruled. (b) Show the differences between these forms of government.

4. (a) State the causes which led to the French and Indian war. (b) Give the names and dates of three important battles of this war.

5. (a) Name three oppressive measures enforced by the British government that were opposed by the colonists. (b) When and where did the first Continental Congress meet, and what resolutions did it adopt?

6. (a) Describe briefly two important battles of the Revolution. (b) What two generals, either from jealousy or revenge, opposed Washington, and how did they bring ruin and disgrace upon themselves?

7. Speak of the Louisiana purchase: (a) Negotiations for its purchase. (b) Extent of territory and price paid. (c) States and territories formed from this territory. (d) The State first admitted from this territory, and when. (e) The State last admitted from this territory, and when?

8. Give names and dates of the following: (a) Two important battles in the war of 1812. (b) One important battle in the war with Mexico. (c) Two important battles in the Civil war.

9. (a) What presidents have died in office? When, and who succeeded each? (b) In whose administration, and at what date were the following measures passed: (1) The Omnibus Bill? (2) The first High Protective tariff? (3) The Sub-Treasury Bill? (4) The Civil Service Reform Bill.

10. (a) Name three leading statesmen of the present Democratic party, and three of the Republican party. (b) What two important bills were passed by the last Congress? (c) What changes have taken place in the cabinet of President Cleveland?

ARITHMETIC.

[First, Second or Third Grade Certificate.]

1. (a) Resolve 230299 into prime factors. (b) Write four multiples of 24. (c) Given the sum and difference of two numbers, how find the numbers? (d) Write 538000 by Roman notation.

$$2. 876 + 94 \times 16 - (\overline{72 \times 19} \div 9 + \overline{9 \times 144} \div 8 - 175) = ?$$

3. (a) At \$6.45 per C., how many shingles can be bought for \$47.73? (b) At \$7.50 per ton, how many bales of hay, weighing 50 lbs. each, can be bought for \$90?

4. A roll of paper 8 yds. long, 18 in. wide, costs \$0.85. What will it cost to paper the walls and ceiling of a room 20 ft. $\times$ 16 ft. $\times$ 10 ft., no allowance being made for openings, and the cost of labor being \$0.37 $\frac{1}{2}$ per square?

5. A farmer sells through his agent a consignment of cotton at 2 $\frac{1}{2}$ per cent. commission, and increasing the proceeds by \$1,508, instructs his agent to invest the amount, less the commission, in flour and sell immediately. This the agent does, but before the sale could be effected flour declines 10 per cent., in consequence of which the farmer sustains a loss of \$677.90. If the agent's commission for buying be 4 per cent., and for selling 3 per cent., how many bales of cotton, 400 lbs. each, did he sell, cotton being worth 5 cents?

6. Jones sold a horse to Brown for 233 $\frac{1}{3}$ per cent. of his cost, or \$600 above cost. Brown sold him to Davis at a loss of 33 $\frac{1}{3}$ per cent. (a) What did Jones give for the horse? (b) What did Brown get for him?

7. Mr. B. of DeFuniak Springs makes a negotiable note for \$250 in favor of Mr. C., bearing interest from date at 8 per cent., payable in 90 days. Date of note September 10, 1895. C. has the note discounted October 17, at 10 per cent. (a) Write the note. (b) Find time it falls due. (c) Find time it has to run. (d) Find proceeds.

8. What is the difference between the *true* and the *bank* discount on \$250 for 1 year, 4 months and 21 days?

9. A cubical block of granite contains 41033625 cubic inches. (a) Find radius of inscribed sphere; (b) radius of circumscribed sphere.

10. A cylinder 10 feet long and 5 feet in diameter has been cut into the largest possible cone. How much was cut, or what part of the cylinder was cut away?

ENGLISH GRAMMAR.

[First, Second or Third Grade Certificate.]

1. (a) What are the three ways of distinguishing the masculine and feminine genders? (b) Give examples.

2. Give the feminine genders of the following: Earl, friar, hart, sire, sloven, stag, swain, don, czar and marquis.
3. Write the plurals of the following: Ottoman, alderman, court-martial, mouthful, nebula, focus, hypothesis, goodness, trout, elf, it, aid-de-camp, billet-doux, portemonnaie, staff, Nero, n, Dr., Mr. Jones, and chimney.
4. Compare the following adjectives: Bad, little, far, fore, lazy, ill, good-natured, evil, old, and late.
5. (a) Classify verbs with respect to meaning; (b) form. (c) Give five examples of each.
6. Give synopsis of the verb *have* with *she* in all moods in both active and passive voices.
7. Give a complete classification of the noun and pronoun.
8. (a) In what ways may a noun be in the absolute case? (b) Illustrate each.
9. Diagram and analyze this sentence:
 The clouds which rise with thunder, slake
 Our thirsty souls with rain;
 The blow most dreaded fails to break
 From off our limbs a chain. —Whittier.
10. Parse in full: Which, slake, our, rain, dreaded, fails, break, from, limbs, and chain.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Name and explain all the imaginary lines and circles used in mathematical geography.
2. (a) Name all the zones and give the boundaries of each. (b) Give the width of each in common miles.
3. Show how the physical features largely determine the industries of any country.
4. Name the South American States and the capital of each.
5. Describe Cuba: (a) Its size in square miles, (b) Physical features. (c) Products. (d) Races and character of people. (e) Present government.
6. What advantages would accrue to the United States from the Panama canal?
7. Name four prominent river systems of the United States.
8. Tell of the German Empire: (a) Number of States comprising it. (b) Name four largest. (c) How is each governed. (d) Describe its legislative bodies.
9. Draw an outline map of Florida, and locate its river systems and ten chief cities.
10. Draw a township, number its sections, sub-divide its 20th section into quarter-quarters, and its $SE\frac{1}{4}$ of the $NE\frac{1}{4}$ into quarter-quarter-quarters and make a cross in the $SE\frac{1}{4}$ of $SE\frac{1}{4}$ of $SE\frac{1}{4}$.

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. (a) What is the use of the paragraph in composition? (b) Illustrate.

2. (a) Name the different parts of a letter. (b) How should each be punctuated?

3. (a) What is meant by *outlining a subject*? (b) Make an outline of the following subject: A Day on the Gulf.

4. (a) Name five figures of speech. (b) Illustrate each with a short sentence.

5. (a) How would you rank letter writing in importance among the various forms of composition? (b) At what stage of the pupil's education would you teach letter writing?

6-7. Write a short letter to a County Superintendent applying for a school. State your age, experience in teaching, educational advantages, your late reading on teaching as a science, salary you expect, and name two persons as references as to your character and success as a teacher. Be careful about the beginning and closing of your letter.

8-10. Outline your subject with not less than five heads and write an essay of not less than 100 and not over 200 words on one of the following subjects:

(a) Necessity of Summer Schools for Teachers.

(b) Uniform Examinations.

(c) The Comparative Educational Value of English Grammar and Arithmetic.

(d) Duties of a Teacher the First Day of School.

NOTE.—Punctuation, capitalization, spelling, paragraphing, style and subject matter each to be considered in grading the last question.

PHYSIOLOGY.

[First, Second or Third Grade Certificate.]

1. Define: (a) Physiology; (b) anatomy; (c) hygiene.

2. (a) What is a gland? (b) Describe three of the largest in the human body.

3. What will be the physiological effect of bathing and rubbing after violent exercise?

4. Tell why rapid eating is injurious to health.

5. Define: (a) Systole; (b) diastole; (c) lymph; (d) lacteals; (e) pulse.

6. Name the organs, and explain respiration.

7. Name the organs, and explain the whole process of digestion.

8. Explain the office of the eustachian tube.

9. (a) What do the convolutions of the brain indicate? (b) What is the "arbor-vitæ"?

10. Explain the effects of alcohol and tobacco: (a) Upon the brain; (b) the blood; (c) the nerves; (d) the heart; (e) the stomach.

THEORY AND PRACTICE.

[First, Second or Third Grade Certificate.]

1. Define percept, sense concept, imagination, idea, reason.
2. What is a general concept? How is it formed? What is the relation between general concepts and words?
3. Name five prominent educators, and mention an educational work written by each of them.
4. What is the value of a school program? What are the three things of greatest importance to be considered in making a school program?
5. Give five of the most important qualifications of a teacher.
6. State the substance of some article on an educational topic that you have read in a school journal within the last three months. What school journals do you take and read regularly? Name some of the most valuable pedagogical works that you possess.
7. State the advantages and disadvantages (a) of the question and answer method of conducting a recitation; (b) of the topic method of conducting a recitation.
8. What faculties of the mind are most active in the six-year-old child? What use should the primary teacher make of this knowledge?
9. What is meant by each of the following educational maxims: (a) The concrete before the abstract? (b) Ideas before words? (c) From the known to the related unknown?
10. What special preparations for opening school should a teacher make the week before school opens?

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. Discuss the value of civil government as a public school study.
2. (a) Define government. (b) Show why government is necessary. (c) Name and define the principal forms of government.
3. (a) Give a summary of the nature and duties of citizenship. (b) What are the duties of a government toward its citizens?
4. (a) Explain the nature of the Constitution. (b) Give a brief account of the formation and adoption of the Constitution of the United States.
5. What are the functions of government, and to what divisions of power do they give rise?

6. (a) Define impeachment. (b) Describe the method of conducting impeachment proceedings in the case of a President of the United States.

7. State the qualifications, powers and duties of the Governor of Florida.

8. Name by title the officers who constitute the Governor's cabinet, and define the duties of each.

9. Tell what you can of the origin and growth of the public school system in Florida.

10. (a) Explain how the Constitution of Florida may be amended. (b) Give the substance of two amendments which were adopted in 1894.

ALGEBRA.

[First Grade Certificate.]

1. What difference between (a) arithmetic and algebra? (b) theorem and problem?

2. Define (a) identical equation; (b) quadratic equation; (c) root of an equation; (d) logarithm; (e) coefficient.

3. Divide $\frac{2x+y}{x+y} + \frac{2y-x}{x-y}$ by $\frac{x^2+y^2}{x^2-y^2}$

4. (a) I have two hours to spare; how far may I ride on the street car at the rate of 6 miles an hour, if I walk back at the rate of 2 miles an hour? (b) Demonstrate $a^0=1$.

5. Explain the three methods of elimination with the following simultaneous equations:

$$3x+3y=18$$

$$3x-2y=1$$

6. Find two numbers whose sum multiplied by the greater is 120, and whose difference multiplied by the less is 16.

7. A and B together had \$9,800. A lost $\frac{1}{6}$ of his and B $\frac{1}{5}$ of his. Now they have equal sums; what have they each?

8. Divide 100 into two such parts that the sum of their square roots shall be 14.

9. (a) Find the equation whose two roots are 5 and 2. (b) Insert two geometrical means between 24 and 192.

10. A and B run a mile. First A gives B a start of 44 yards, and beats him by 51 seconds; then A gives B a start of 1 min. 15 secs., and is beaten by 88 yards. In what time can each run a mile?

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. (a) In what respect is the earth like a magnet? (b) What and where are the magnetic poles? (c) What is meant by the "line of no variation"?
2. How have the soils of the earth been formed?
3. Name and account for five areas of scanty rainfall.
4. What are geysers and glaciers? Give the theory of the formation of each.
5. What causes the phosphorescence of the sea?
6. (a) How are the tides caused? (b) Distinguish between *ebb*, *flood*, *spring* and *neap* tides.
7. (a) What family of plants is the largest contributor to human needs and comforts? Show how.
8. (a) What is a valley? (b) a canon? (c) When are valleys transverse? (d) When longitudinal?
9. Define *erosion*, *fossil*, *delta*, *monsoon*.
10. Explain the *monsoons* of the Indian Ocean.

JUNE, 1896.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Define letter, syllable, alphabet, spelling, orthography.
2. Define synonym, homonym, paronym, primitive word, derivative word. Give examples illustrating each definition.
3. Use the following prefixes and give meaning of the word: ex, re, ob, sub, pro.
4. Correct the spelling of the following words, if incorrect: Valliant, insence, surely, dogmattical, irassable, exhaust, loser, hygene, Connecticut, predjudice.
5. Syllabify, mark accent, and give diacritical markings of the following words: Genuine, gratis, inquiry, lapel, mirage.
6. Write the following words in a column and opposite each write a synonymous word: Cheerful, clamorous, defective, edifice, enormous.
7. Give the rule for spelling the second of each of the following pairs of words; Bog, boggy; note, noting; begin, beginner; victory, victorious; daisy, daisies; change, changeable; shoe, shoeing; hate, hateful; prefer, preference; singe, singeing.
8. Write homonyms of the following words: Need, lock, step, seal, seed, pique, erè, meddle, counsel, stationary.

9-10. Spell correctly the following: Vishus, dominoze, lettis, benefitted, sedishus, gageable, atturny, boka, sheckel, bilyus, chizzle, wevil, lackrimal, mortis, korpusel, kristalize, battalyun, rubarb, sudonim, bizness.

READING.

[First, Second or Third Grade Certificate.]

1. Describe in full the word method; the phonic method. Name what you consider the qualities of good reading.

2. Define pitch, force, movement, emphasis, inflection.

3. Give general directions for position and management of body in reading or speaking. Show how lessons in reading may be made to serve as exercises in literature and cultivate a literary taste.

4. What other subjects are taught incidentally in connection with the teaching of reading?

5. Give three general directions for reading poetry, and state some errors to be avoided.

6-8. Read a paragraph of prose.

8-10. Read an extract of poetry.

[The examiner will grade on the examinee's paper the last two questions for the use of the Grading Committee in grading this subject.]

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. Why was this continent named America?

2. Sketch briefly the settlement of Virginia.

3. Relate the incident connected with "The Charter Oak."

4. What is meant by the "Monroe doctrine"? What recent occurrences make this in our foreign relations a matter of great importance?

5. What events do these dates suggest: 1492, 1607, 1620, 1754, 1775, 1787, 1812, 1845, 1861, 1863?

6. Locate and state for what noted in our history: Saratoga, Yorktown, Gettysburg, Richmond, Chicago.

7. Name five great inventions and associate with each invention named the name of the inventor.

8. Name the last five Presidents, and something of importance that occurred during the administration of each.

9. Relate some important historical facts connected with each of the following: Thomas Jefferson, Alexander Hamilton, Daniel Webster, Andrew Jackson, Grover Cleveland.

10. What was the expressed position of the Republican party respecting slavery when Abraham Lincoln was first elected?

UNITED STATES HISTORY.

[First Grade Certificate.]

1. Define history. State your method of teaching United States history.

2. Tell when and where the first permanent English settlements were made in the United States.

3. Name and give causes of two wars in which the United States have been engaged since 1800.

4. What have been the important additions to the territory of the United States since 1783?

5. What is meant by the Civil Service of the United States? What evils was the Civil Service bill designed to correct?

6. Describe the battle of Gettysburg, naming the prominent commanders in each army.

7. What was the necessity of an Electoral Commission? What do you think of the justice of its acts?

8. Trace briefly the financial history of this country. What of the "wild cat" banks? Panics of 1837 and 1873? What seems to be the present financial policy?

9. What of the growth in *art, science*, literature, and education in the past half century?

10. Explain what is meant by the following: "Protective tariff," "tariff for revenue," "free silver," "the initiative and referendum," in political affairs.

ARITHMETIC.

[Second or Third Grade Certificate.]

1. Express by Arabic notation twenty billion, nineteen thousand, nineteen (one number); by Roman notation six hundred five thousand (one number); express in figures MDL; in words 625.625.

2. Divide the least common multiple of 7, 42, 6, 9, 10, 630, by the greatest common divisor of 110, 140, 680.

3. A had his money in three pockets; in the first $\frac{1}{4}$, in the second $\frac{1}{5}$, in the third \$85 more than $\frac{1}{8}$ of the whole. He invested \$75 $\frac{3}{4}$ in a horse, \$65 $\frac{1}{8}$ in a cow, \$18 $\frac{3}{8}$ in a buggy, the remainder in sheep at \$24 $\frac{1}{2}$ a head. How many sheep did he buy? [NOTE.—Don't convert into decimals.]

4. Add $1\frac{7}{25}$ expressed decimally to 600 and twenty-five ten-thousandths; diminish the sum by 596 $\frac{11}{1000}$ expressed decimally; multiply the remainder by six and 34 thousandths; divide the product by six thousand thirty-four ten-thousandths, and what is the result?

5. Divide 375 by .75; .75 by 375; find the product of their quotients and express the answer in words.

6. Find the interest on \$1,297.60 for 2 years, 11 months, 18 days at 7 per cent.

7. Received \$33.25 interest on a sum of money loaned 5 years previous at 7 per cent. What was the sum lent?

8. A owes B \$321, payable in one year. What is the present worth of the debt, money being worth 7 per cent.?

9. What sum of money will produce \$300 in 8 months, if \$800 produce \$70 in 15 months? Solve according to the rule for compound proportion.

10. A commission merchant sold a consignment of flour at 2% commission and invested the net proceeds in bacon at 5% commission. What did he receive for the flour and pay for the bacon, if his total commission amounted to \$150?

ARITHMETIC.

[First Grade Certificate.]

1. What number taken from $2\frac{1}{2}$ times $12\frac{1}{2}$ will leave $20\frac{3}{4}$? Find the cost of $20\frac{1}{8}$ cords of wood, if $3\frac{1}{2}$ cords cost \$11.37 $\frac{1}{2}$.

2. What is the difference between the area of a floor 25 feet square and that of two others each 12 feet 6 inches square?

3. When it is 12 o'clock (noon) at Portland, Oregon, what time of day is it at Omaha, 96 degrees W., supposing that the longitude of Portland is 124 degrees W.?

4. A fence five boards high is built around a square field containing 10 acres. The top board is 4 inches wide, the base board is 10 inches wide, the middle boards each 6 inches wide; what is the cost of the lumber at \$12.50 per M?

5. What per cent. is made by a druggist who buys medicine at \$5 a pound, avoirdupois weight, and sells it at 48 cents an ounce, apothecaries' weight?

6. Find the difference between the true and the bank discount on a non-interest bearing note for \$6,285 for 9 months and 15 days, money being worth 6 per cent.

7. If six men dig a cellar 22.5 feet long, 17.8 feet wide, and 10 feet 3 inches deep, in 3 days of 10 hours and 15 minutes each, how many men will it require to dig another in 12 days of 8.2 hours each, 45 feet long, $34\frac{3}{8}$ feet wide, and 12.3 feet deep?

8. (a) Find the square root of 16,493,844.

(b) Find the cube root of 7,301,384.

9. How much will it cost to plaster a room 16 feet 9 inches long, 14 feet 8 inches wide, 10 feet 6 inches high, if there are three windows 6 feet by 2 feet 9 inches, two doors 7 feet by 3 feet, and a base board one foot wide; the price of plastering being 25 cents per square yard?

10. What will be the cost in U. S. money of a cylinder of oil whose diameter is 3 feet and whose length is $\frac{1}{4}$ feet, if oil is worth a franc per gallon?

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. Name eight parts of speech. Which parts of speech have inflection?
2. Decline: Which, thou, man-servant.
3. Compare: Good, polite, ill, much, handsome.
4. Give the principal parts of: Lie, lay, set, sit, sing, rise, know, bear (bring forth), raise, fly.
5. When are verbs said to be regular? Give the principal parts of four irregular verbs, in the use of which wrong forms frequently occur.
6. Define declension, conjugation, comparison, voice and case as used in grammar.
7. Diagram or analyze:
*"He who filches from me my good name,
 Robs me of that which not enriches him,
 And makes me poor indeed."*
8. Parse in full the eight words italicized in the above sentence.
9. Write the synopsis of the verb *eat* with *thou* in both the indicative and subjunctive moods, passive voice.
10. Define syntax. Change the following sentences to correct syntax, and give reason in each instance for your correction:
 - (a) They are both alike.
 - (b) If I am not mistaken the number is 26.
 - (c) The committee was divided in its opinions.
 - (d) I wished really to know.
 - (e) Either you or I are in error.
 - (f) Which of the group of men is the taller?
 - (g) Have you Webster and Worcester's dictionary.
 - (h) There goes Mr. and Mrs. Smith.
 - (i) It could not have been her.
 - (j) I feel badly.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. Write the possessive case, both singular and plural, of the following: Fly, child, brother, sheep, mother-in-law, mouse, ox-cart, money, portico, chimney.
2. Compare and give reason for so comparing each: Thin, clever, wooden, merry, nigh, ample, grey, universal, shy, beautiful.
3. State the difference between *what* and the other relatives. When are *that* and *as* relatives?
4. Write sentences in which *what* is used as a noun, pronoun, adjective, adverb and interjection.
5. Write the synopsis of the verb *eat* with *he* in all modes and tenses and in both voices.

6. Analyze: I seem to have been only *like a boy* playing on the seashore, and diverting *myself* in *now* and then *finding* a smother pebble or a *prettier* shell than ordinary, *whilst* the great ocean of truth *lay all* undiscovered before me.

7. Parse in full the ten words in italics in the above sentence.

8. Which do you consider more important, analysis or parsing? For what reason?

9. Distinguish between the analysis and diagram of a sentence.

10. Diagram: A School Board which assigns any teacher to a school, when there is among its applicants another teacher unemployed and better qualified for the position, sins against God, the State, and every child and patron in that school district.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Define longitude; latitude; meridian; parallel; ecliptic.

2. Locate and define each of the following: Amazon; Vesuvius; Cuba; Nile; Liverpool; Gibraltar; Sahara; Honolulu; Yukon; Venice.

3. State the name of the line which marks the highest northern limit on which the rays of the sun are ever vertical, and give the date on which the sun reaches this limit.

4. Describe the drainage of Florida. Name the five largest cities in the State, and locate each. Estimate the area and population of Florida.

5. To what country does Cuba belong? What is the cause of the political trouble now brewing there?

6. How do you account for the climate along the coast of Alaska? Labrador?

7. Name five of the largest cities of the world and locate each. Name five largest cities. five longest rivers in the United States, and locate the cities. Give the sources of, and the direction and into what waters the rivers flow.

8. Of what foreign countries are the following the principal export products: Tea, sugar, coffee, cotton, opium, cinchona, wool, watches, jute, tin?

9. Write three columns: In the first, the names of the countries of Europe; in the second, the names of their capitals; in the third, their form of government.

10. Draw a diagram of a township, sub-divide the sixteenth section into quar-quarters, and locate thus (x) a school house in the sw^1_4 of ne^1_4 .

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. What is composition?
2. What is style? Give four requisites of style.
3. What is redundancy? What is tautology? Remove the redundancy in the following sentence: "Every man on the face of the earth has duties to perform." Remove the tautology in: "The effects and consequences of such corruption and degeneracy are deplorable and lamentable."

4. Give six rules for the use of the comma.

5. Name and make all the other marks of punctuation. State briefly the use of each.

- 6-7. Write a letter to your County Superintendent, using not less than 100 words, giving the following facts:

Where you were educated, where you last taught, the name of the supervisor, the grade of certificate then held, where it was obtained, the grade you are now aiming to secure, the salary you expect; give two references as to your past success as a teacher; or student, if you have never taught.

- 8-10. First give outline of your subject and write a composition one page in length on one of the following subjects:

My Favorite Books.

Industrial Education.

Benefits Arising From Summer Schools.

The Teacher's Opportunities.

NOTE.—In grading the last two consider:

- (1) The thought expressed.

- (2) The correctness and propriety of language used.

- (3) The orthography, punctuation, paragraphing, use of capitals, and general appearance.

PHYSIOLOGY.

[First Second or Third Grade Certificate.]

1. Define physiology, anatomy, hygiene.

2. Give three principal uses the bones serve. Give three principal uses the muscles serve.

3. Classify the bones of the arm, and name the bones in each class as usually given in the text-books.

4. Explain the steps of digestion, beginning with mastication.

5. Describe the heart, and the principal circulatory organs.

6. Name the principal organs and describe the process of respiration.

7. Name the grand divisions of the brain, and the function of each division.

8. Tell how to properly care for the eyes, with reference to character of light; direction from which it should come; size of print; when to rest them.

9. Describe the nervous system. Into what classes are the nerves classified? What are motory nerves?

10. Give six specific cautions you would teach your pupils to observe in regard to eating and drinking. Enumerate some of the harmful effects of narcotics and alcoholic liquors on the human system. What importance do you attach to the formal study of physiology and hygiene in the common schools? What is the proper temperature to maintain in a schoolroom? What is the teacher's duty in regard to ventilation and cleanliness in the schoolroom?

THEORY AND PRACTICE.

(From Page edited by Payne.)

[First, Second or Third Grade Certificate.]

1. Give a brief sketch of the life of David Perkins Page.

2. Name three conceptions of fitness for teaching in the order of their historical sequence. What is the real basis of fitness for teaching, so far as it can be obtained from study? (Chap. I.)

3. Scholarship aside, what is the first thing to be sought by a candidate for the office of teacher? (Chap. II.)

4. Name four inferences in regard to education drawn from the illustration of the "neglected pear tree." Name four things for which the teacher is mainly or largely responsible in the education of the young; state the order in which the elementary studies should be taken up. The schoolroom is no place for what kind of teacher?

(Chap. III.)

5. Name five personal habits indispensable to a teacher's success. (Chap. IV.)

6. Name in order, if you can, the twenty-two studies which a "good teacher, even of a common school, should make himself acquainted with." What did Martin Luther say of the school-master that cannot sing? (Chap. V.)

7. What is education in the absolute sense? Why do even good scholars fail as educators? (Chap. VI.)

8. Name two erroneous processes of teaching, into one of which many teachers fall. What more excellent way is illustrated by an ear of corn, and whom does the last process awake? (Chap. VII.)

9. State briefly nine suggestions which will enable teachers to excite interest in conducting recitations.

(Chap. VIII.)

10. Give in brief seven objections to offering prizes as incentives to study. Name five proper incentives that may be safely employed to excite interest in study.

(Chap. IX.)

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. Who are citizens of the United States? How may others become citizens?

2. How are the following United States officers chosen and for what length of time: President, Senator, Representative, Secretary of State, Judge of the Supreme Court?

3. What is the Constitution of the United States? How made? How adopted? How amended?

4. Name the three departments of government. Describe the law-making department and the stages through which a United States statute must pass before it becomes a law.

5. What Constitutional qualifications are necessary to become a President? U. S. Senator? Representative? Why prohibit a foreign born citizen from being President?

6. What is meant by the Australian Ballot? Give the main features of the system.

7. What is treason? How generally punished? What is a "filibuster"?

8. How are territories governed? How do they become States? Name the principal changes they undergo in becoming States.

9. State three principal duties of each of the following: Governor, State Superintendent of Public Instruction, County Superintendent of Public Instruction, County Board of Public Instruction, School Trustee, Supervisor, Public School Teacher.

10. Who constitute the State Board of Education? What creates the permanent school fund? What school funds are apportioned by the State, and upon what basis? From what sources are county school funds obtained? On what basis and by whom apportioned?

ALGEBRA.

[First Grade Certificate.]

1. Define algebra, quantity, root, a radical, equation.

2. Find the greatest common divisor, $a^4 - b^4$, and $a^6 - b^6$.

3. Find the least common multiple of $a^2 - b^2$, $a^4 - b^4$ and $a^2 - 2ab + b^2$.

4. There is a number such that the sum of its $\frac{1}{4}$ and $\frac{1}{5}$ exceeds the sum of its $\frac{1}{6}$ and $\frac{1}{8}$; required the number.

5. Write the development of the binomial $(1 - x)^6$.

6. A number is expressed by 3 digits. The sum of the digits is 9. The number is equal to 42 times the sum of the first and second, and the third digit is twice the sum of the other two. Find the number.

7. Square. $\sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}}$; Expand $(a + \sqrt{a^2 - x^2})^2$.

8. What two numbers are to each other as 4 to 5, and the difference of whose numbers is 81?

9. A farmer bought a number of sheep for \$80; if he had bought 4 more for the same money, he would have paid \$1 less for each; how many did he buy?

10. Solve $2\sqrt{x} + \sqrt{4x + 1} + \sqrt{7x + 2} = 1$.

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. Define physical geography. What is meant by the "laws of nature"?

2. How have the soils of the earth been formed?

3. Explain the trade winds. Tell how glaciers are formed and where found.

4. Name all the causes that affect the heat and cold of a place.

5. Name some of the great rainless regions of the earth, and tell why they are rainless.

6. What are tides? What causes the difference in their heights?

7. Explain the mutual dependence of plants and animals.

8. What is an equinox? How many are there? When do they occur and why?

9. If you were at the equator June 4th. which direction would your shadow fall? Give the reason for your answer.

10. Why should more rain fall on a mountain than on the low lands at its base? What effect does cutting away the timber have upon the climate of a country?

SEPTEMBER, 1896.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Illustrate with words all the diacritical marks of the vowels a and o.

2. Write the suffix with its meaning in each of the following words: Divisible, doubtful, waspish, shorten, globe, ule.

3. Give five nouns, underscoring the suffix in each, the suffixes meaning respectively: Act of, to make, one who, pertaining to, state of being.

4. Use a prefix with each of the following words, and show how the meaning is changed: Print, fair, modest, sight, rate.

5. What are the words called that sound alike, but are spelled differently? That mean nearly the same thing?

6. Spell and define the following words with two others having the same sound as each: Write, road, raise, seen, sight.

7. Add the suffixes *en*, *ness*, *ist*, *able*, *ence* to the following words in order, and give rule for spelling each derivative: Glad, dainty, copy, service, defer.

8. Give diacritical marks for two sounds of *c*; two sounds of *g*. Illustrate each.

9-10. Spell correctly: Beefstake, ockurence, senteneal, lilleys, billyards, inflaimashun, exadgerate, tiranicle, sir-single, vaxinate.

READING.

[First, Second or Third Grade Certificate.]

1. (a) What is reading? (b) Define articulation. (c) Give an error in articulation.

2. (a) What is emphasis? (b) Mention three ways of using it.

3. (a) Is there a difference in quantity of tone and pitch of voice in reading? (b) Explain your answer.

4. What drills do you give pupils as to: (a) Position of body? (b) Holding of book? (c) Breathing? (d) Gesture? (e) Facial expression?

5. How would you conduct a reading lesson in a large class, looking to: (a) Correcting errors? (b) Naturalness? (c) Mastery?

6-10. Read an extract of ten lines each of prose and poetry for your examiner.

(Examiner will grade from 0 to 25 each extract read and deliver same to the Grading Committee to be added by them to the grading of the questions above.)

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. Name three of the chief advantages to be derived from the study of history.

2. Into what periods would you divide United States history?

3. Name the wars engaged in by the United States, the cause or causes of each, with the results.

4. Of the great orators, which have been Presidents? Which of the great generals have been Presidents?

5. Which of our Presidents sprang from obscure origin? Give a brief sketch of the early life of each.

6. Make a list of the Presidents of the United States, affixing to each name the time he served and the political party to which he belonged? (In columns.)

7. How many electoral votes will the State of Florida have this year?

8. Who was the first Governor of Florida elected by the people? What man prominent in Florida history afterwards became President of the United States?

9. Name five important acquisitions of territory. Who was President when each was acquired? Tell what led to the acquisition in each case.

10. What is the paramount question at issue in the present national campaign? What does each party claim will be the result if the other triumphs?

UNITED STATES HISTORY.

[First Grade Certificate.]

1. Why is history valuable as a study? Why is the history of the United States important to us?

2. Give a sketch of the territorial development of the United States.

3. Name the leading questions at issue at the following dates: 1812, 1832, 1844, 1850, 1860.

4. What did each of the following write: Irving, Bryant, Longfellow, Whittier, Holmes, Poe, Emerson, Lowell, Cooper, Hawthorne?

5. Name three Presidents whose elections were attended with unusual circumstances, and explain those circumstances.

6. Who was the author of "Millions for defense, but not a cent for tribute"?

7. What States, besides the original thirteen, became States without having been organized as territories?

8. How did the United States get Florida? Who was the first Governor after it became a State?

9. Couple the names of the inventors with what you consider the five greatest American inventions.

10. What are the principal questions at issue in the approaching national election? State the position of the three leading parties.

ARITHMETIC.

[Second or Third Grade Certificate.]

1. Divide one hundred and one tenth by thirteen thousandths.
2. A owned $\frac{5}{6}$ of a factory and sold $\frac{3}{4}$ of his share to B, who sold $\frac{1}{2}$ of what he bought to C, who sold $\frac{2}{3}$ of what he bought to D. What part of the whole factory did each of them still own after the last sale?
3. A and B hire a pasture for \$15.50. A puts in 8 cows and B puts in 12 cows. How much must each pay?
4. Reduce .325 of a year to months and days.
5. The longitude of Tampa is $82^{\circ} 25' W$. The longitude of San Francisco is $122^{\circ} 30' W$. When it is 1 p. m. in Tampa, what time is it in San Francisco?
6. Sold two houses at \$2,484 each; on one I gained 8% and on the other I lost 8%. What per cent. did I gain or lose on the transaction?
7. What % of $\frac{3}{4}$ is $\frac{3}{4}$?
8. How must goods costing 15 cents a yard be marked to yield a gain of $33\frac{1}{3}$ per cent.?
9. What will be the proceeds of a 60 day note for \$1,200, if discounted at a bank at 8% 18 days after it is drawn?
10. Sold a farm for \$1,800 on a commission of 5%; invested the net proceeds in oranges, reserving a commission of 3%. How many boxes of oranges did I buy, and how much change had I over?

ARITHMETIC.

[First Grade Certificate.]

1. Divide \$7 $\frac{3}{4}$ among 5 boys and 3 girls, giving each boy $\frac{3}{4}$ as much as each girl. How much will each get?
2. What time is it when $\frac{3}{4}$ of the time past noon equals $\frac{3}{4}$ of the time before midnight?
3. What per cent. did a huckster make on his investment, who bought five bushels of chestnuts at \$3 a bushel, dry measure, and retailed them at 10 cents a quart, liquid measure?
4. What will be the proceeds of a 90-day note, face \$800, dated August 15, 1896, and bearing interest at 8 per cent., if discounted Sept. 8, 1896, at 10 per cent.? Bank discount, 360 days counted a year.
5. How far is it in a straight line from the northwest corner of Sec. 6, Township 2 N. of Range 3 west, to the southeast corner of Sec. 35, T. 3 S., R. 3 E., neglecting all corrections for curvature of earth's surface? Draw a diagram.
6. What will be my gain on 35 shares of stock bought at $82\frac{1}{2}$, brokerage $\frac{1}{4}$ %, and sold at 109 $\frac{1}{4}$, brokerage $\frac{3}{8}$ %?

7. Kohn, Furchgott & Co. have an account with Field & Leiter which stands as follows:

DEBIT ITEMS		CREDIT ITEMS.	
April 10, 1896, Mdse.	\$150 00	April 12, 1896, By cash	\$250 00
" 30, " " "	400 00		
May 16, " " "	100 00	May 1, " " "	200 00
June 24, " " "	500 00	June 7, " " "	400 00

When should a note in settlement of the above account have been given? And what is now due (Sept. 8) on the acct., counting interest at 8%, 360 days to the year?

8. How many square feet of galvanized sheet-iron will be required to make a cubical tank, without cover, which will contain 1000 gallons of water?

9. How many lead balls, 3 inches in diameter, will weigh as much as one iron ball 12 inches in diameter? Sp. G. of lead being 11, iron 7.

10. What will be the weight of an iron column in the shape of a hollow cylinder whose walls are 2 inches thick, outer circumference 25.1328 inches, and length of pillar 12 feet? (A cubic foot of water weighs 62½ lbs. Sp. G. of iron 7.)

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. Write the possessive case, plural number, of: It, which, cupful, son-in-law, Knight-Templar.

2. Which parts of speech are declined? Which are compared? Which are conjugated? Decline son-in-law, who, it.

3. Compare: Fit, much, fore, up, nigh.

4. Decline in full the 3rd personal pronouns.

5. Write the synopsis with *he* of the verb *catch* in the progressive form in the active and passive voices.

6. Parse in full each word in, "Whence all but him had fled."

7. Correct, give rule for corrections and diagram: "The chinneys were built from brick."

8. Write a simple sentence with the subject, predicate and object each modified.

9. Diagram or analyze this sentence, and parse in full italicized words:

The clouds *which* rise with thunder, *shake*

Our thirsty souls with rain;

The blow most *dreaded* fails *to break*

From off our limbs a *chain*.

—Whittier.

10. Write sentences of the following kinds:

(a) A compound declarative sentence, each of its parts being complex; one containing a relative clause, the other containing an adverbial clause denoting time.

- (b) A complex interrogative sentence containing an adverbial clause denoting place.
- (c) A simple declarative sentence with the verb in the potential present.
- (d) A compound imperative sentence.
- (e) A simple sentence containing two singular subjects connected by *or*.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. Write the possessive singular and plural of: Man, brother-in-law, country, he, enemy.

2. When more than one, give different plurals and explain the formation of the plural of the following: Staff, Miss Smith, Mrs. Jones, Dr. Coe and Lee, fish, hose, heathen, four pair, by score, politics.

3. Compare: Good, polite, ill, much, handsome, and give reason for each comparison.

4. Write the synopsis with *thou* of the verb *catch* in both the active and passive voices, indicative and subjunctive modes.

5. Correct, give law and diagram: "Every one of the persons who have pews in their church have concurred in the same sentiment."

6. Write a complex sentence, complex in subject, predicate and object.

7. There has always been a question whether men who are reared within the friction of great cities have the better opportunities for development, or whether they may become stronger or more robust from constant communion with the sublimity of nature, where the great peaks lift their faces to the skies and the streams make music as they flow toward the sea.—*Charles E. Fitch*.

(a) Select from the above exercise and write in a column the following: An adjective phrase; an adverbial phrase; an adverb that modifies another adverb; a predicate noun; two adjectives in the comparative degree, one compared by means of a suffix, the other by means of an adverb; a relative noun; an intransitive verb; a verb in the potential mode; two correlative (corresponding, alternate) conjunctions.

8. In the exercise above, give two words that connect clauses; give the first proposition; name a noun never used in the plural; give the subject of the sentence; parse *there*.

9. Diagram the following:

I like the lad who, when his father thought
To clip his morning nap by backneyed praise
Of vagrant worm by early songster caught,

Cried, "Served him right! 'tis not at all surprising;

The worm was punished, sir, for early rising."

—*Saxe*.

10. Parse in full from the above: Lad, who, when, clip, caught, cried, served, right, sir, Saxe.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Name ten great nations of the earth and the capital of each.

2. What are the tropics? Why so placed? What is longitude? What is the greatest longitude a place can have? What is the greatest latitude a place can have?

3. Describe the island of Cuba, giving its size, population and products, and the trouble that exists there now.

4. What and where are the following: Pyrenees? Blanc? Danube? Gibraltar? Selvas? Sardinia? Pekin? Tanganyika? Olympia? Orinoco?

5. Name ten States of the United States and the capital of each.

6. Name five rivers in the United States that empty into the Atlantic Ocean, and five States that touch the Gulf of Mexico.

7. What would you teach about France?

8. Name a State in the United States prominent in the production of gold; of cotton; of wheat; of tobacco; of manufactured articles.

9. Describe Florida. Give its history, surface, products, rivers, cities, population, and area.

10. Name the principal exports and imports of the United States. Name five prominent nations with which the United States has commercial relations.

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. Name five essential points to be considered in grading a composition.

2. Give five important rules for the use of capital letters.

3. Write five rules for the use of the comma.

4. Name five figures of speech and illustrate each with a sentence.

5. Give reasons why it is best to outline a subject before writing upon it. Name the essential properties of good style.

6-10. Write an essay of not less than 300 words on one of the following subjects:

- (a) Ingratitude.
- (b) The greatest needs of the Florida public school system.
- (c) The value of studying methods of teaching.
- (d) The duties of the teacher to the community.
- (e) Are teachers' training schools desirable?

NOTE.—In grading the composition, observe the spelling, punctuation, capitalization, grammatical construction, value of the thought expressed and the general appearance.

PHYSIOLOGY.

[First Second or Third Grade Certificate.]

1. What are the offices of the skeleton? Name and locate the bones of the upper body.
2. What are muscles? Explain the muscular system, naming the largest and most important muscles.
3. Name all the organs of respiration. Explain the consequences of re-breathing the air in a room.
4. Explain the function of each of the excretory organs.
5. Name the organs and explain the process of digestion.
6. What is the effect upon digestion of drinking great draughts of ice water?
7. What effect has alcohol upon digestion? What upon the heart? Upon the brain and the nervous system?
8. For warm climates which is the better food, meats or vegetables? Explain your answer.
9. Should one work or study just after eating? Why should one not eat rapidly, or when mad or worried?
10. Explain the effects of chewing tobacco and smoking. Which is more injurious and why?

THEORY AND PRACTICE.

[First, Second or Third Grade Certificate.]

1. Name three requisites in the teacher for good government. How would you secure good government in your school?
2. In what manner and to what extent should a teacher make himself a useful citizen in the community where he labors?
3. Write a program for a day's exercises in the common school.
4. What is the last resort of a teacher in securing good order and establishing government? What is punishment? What is the object of punishment? Name three proper punishments. Name some improper punishments.

5. What is the object of the lesson? By what should the teacher be governed in assigning a lesson?

6. Of what value are reviews? What methods are there of conducting reviews?

7. Explain the relation that should exist between the teacher and the parents of his pupils.

8. How may a teacher improve himself in his profession?

9. What special preparation should a teacher make for his first day of school? How would you occupy the first hour of the first day of school?

10. Give a concise definition of teaching. Name some of the qualities that should be possessed by a good teacher, scholarship aside. Salary aside, name some of the rewards of a faithful teacher.

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. What is government? Into what departments is the government of the United States divided?

2. How are members of the House of Representatives chosen? How long do they serve? How are Senators chosen? How long do they serve? What is the presiding officer in each branch of Congress styled, and how is he elected?

3. What is the ratio of representation in the House of Representatives? Where do all bills for raising the revenue originate?

4. Name three powers given to, and three prohibitions placed upon, Congress.

5. Explain in full the manner of election of a President of the United States.

6. What is impeachment? Which branch of Congress has the sole power of impeachment? Which branch tries impeachments? What is the limit of punishment in cases of impeachment? Who presides over the Senate in case a Senator is being tried on impeachment?

7. In what ways may a bill become a law under the Constitution of the United States?

8. By the Constitution of Florida, in what is the legislative function of the State vested? The Executive? Does the Governor of Florida have the veto power? Is he eligible for re-election? If so, explain under what circumstances.

9. What officers compose the State Board of Education in Florida?

10. Under the Teachers' Uniform Examination Law, what certificates are granted? What grades are required, and for what time are the different certificates granted?

ALGEBRA.

[First Grade Certificate.]

1. Define the following: Algebra symbol, equation, identical equation, exponent, coefficient, simple equation, quadratic equation, binomial, surd.

2. Factor $144x^2y^4 - 225z^6$.

3. Find the highest common factor of $x^3 - 8$, and $x^3 - 6x^2 + 11x - 6$.

4. Resolve $a^3 - b^3$ into all of its prime factors.

5. Divide $\frac{2x+y}{x+y} + \frac{2y-x}{x-y}$ by $\frac{x^2+y^2}{x^2-y^2}$

6. Solve by three methods: $\begin{cases} 3x - y = 10. \\ x + 4y = -1. \end{cases}$

7. A can do a piece of work in 8 days and B in 12 days; they work together for 4 days when B quits; how long did it take A to finish the job?

8. Divide $4\sqrt{50}$ by $2\sqrt{5}$.

9. Find the equation whose two roots are 5 and 2. Insert two geometrical means between 24 and 192.

10. Solve $\frac{x+1}{\sqrt{x}} = \frac{a+1}{\sqrt{a}}$

1. Where do tourists go to see the "midnight sun"? At what season and in what direction is it seen?

2. Would a clock whose pendulum was of the right length to keep correct time in Jacksonville need to be regulated differently for Upernavik? Give reasons for answer.

3. How would the climate, drainage, etc., of South America differ from present conditions, if the earth's rotation were the reverse of what it is now?

4. Explain the monsoons.

5. Name and account for five areas of scanty rainfall.

6. What is the general cause of earthquakes?

7. Name and locate the principal types of mankind.

8. Would a canal through the Isthmus of Panama affect the Gulf Stream? Give reasons for answer.

9. Account for deltas.

10. Can man do anything to check the excessive rise and fall of rivers?

JUNE, 1897.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Define: Root, primitive, derivative, homonym, synonym.

2. Syllabicate, mark diacritically the vowels and the accented syllable of the following: Abdomen, condolence, rapine, lowering, apparatus, hymenean, acclimate, inventory, finance, dictionary.

3. Give the rule in each case and spell the derivative formed by uniting in order the following ten words and affixes: Admit and ance; prefer and ence; model and ing; hate and ing; desire and able; outrage and ous; value and able; glory and ous; plenty and ous; bounty and ful.

4. Form a derivative by using each of the following as a suffix or prefix, and illustrate the meaning of the suffix or prefix: In, ad, ante, ate, ful, pre, semi, bi, sub, dom.

5. Write a homonym of each of the following: Pole, hole, faint, seed, done.

6. Form derivatives by uniting with the following words prefixes meaning: Again, not, wrongly, the opposite act, before, print, fair, judge, obey, sight.

7-10. Spell correctly the following words, spelled as to sound: Ven'zn, likoris, vaksinat, striknine (poison), frajil, sanggwin, plajuary, pawlzied, koushienshus, newter, lettis, surfit, isikle, preseed, teatotaler, fassade, auderble, parashoot, seperation, assension.

READING.

[First, Second or Third Grade Certificate.]

1. Name some of the principal objects that should be aimed at in teaching reading.

2. Give your idea of an appropriate recitation in a beginner's reading class.

3. Define monotone, inflection, modulation, emphasis, pitch.

4. Define phrase, clause, paragraph, stanza, apostrophe.

5. Give your method for improving faulty articulation.

6. (a) Is reading an act of the mind or an act of the lips only? (b) Give reasons for your answer.

7-8. Read a paragraph of prose.

9-10. Read one or more stanzas of poetry.

(Examiner will grade from 0 to 20 the last two questions, and deliver the same to the Grading Committee.)

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. What people claim to have discovered America first, and what do you think of their claim?

2. (a) What is known of the government of the Indians when the colonists first arrived? (b) Of the titles of their leaders? (c) Of the character and name of their dwellings? (d) Of their domestic utensils? (e) Of their clothing and food?

3. Give an account of the first legislative body that assembled in the Colonies.

4. When, where, and by whom was the Declaration of Independence written? What body adopted it?

5. What was the leading idea that led to the founding of each of the following Colonies: Virginia, Maryland, Pennsylvania, Rhode Island, Georgia?

6. Why are each of the following celebrated in history: Andre, Arnold, Ethan Allen, John Endicott, Roger Williams, Lafayette, Daniel Boone, Alexander Hamilton, Washington Irving, Alexander H. Stephens?

7. Name the territory of the United States acquired by purchase; by conquest; by annexation.

8. How did people live, dress, travel and transmit mail in the days of Washington?

9. Give the following facts in regard to your own county: (a) Early settlement; (b) when and how it became a separate county; (c) the origin of its name; (d) present population; (e) chief industries and future outlook.

10. Tell what you know of the term, "The Greater New York."

UNITED STATES HISTORY.

[First Grade Certificate.]

1. What are the chief benefits to be derived from the study of history, and what subjects should be taught in connection with it?

2. Give the principal epochs in the history of what is now the United States.

3. Distinguish between the Provincial, Continental and Federal Congresses.

4. Give the meaning and origin of each of the following political terms: Loco-focos, Nullification, Free Soilers, Know-nothings, Underground Railroad, Secession, Southern Confederacy, Emancipation, Carpet-baggers, Mugwumps.

5. (a) Who enunciated the doctrine, "To the victors belong the spoils"? (b) What is meant by "Civil Service

Reform"? (c) Under whose administration was it inaugurated? (d) What is likely to be the outcome of it?

6. What is meant by the "Monroe Doctrine"? What recent occurrence made this question prominent again? Explain.

7. Write five questions you would ask a class about the "Dred Scott Decision."

8. Give a brief sketch of the first one of each in the United States: (a) Railroad; (b) steamboat; (c) newspaper; (d) telegraph; (e) cotton gin.

9. What do you understand by the "Resumption Act" of 1879, and the Sherman Silver Bill repealed by special session of Congress in 1893?

10. What do you understand by the "free and unlimited coinage of silver at the ratio of 16 to 1"?

ARITHMETIC.

[Second or Third Grade Certificate.]

1. The divisor was 17, the quotient 16, the remainder 15; what was the dividend?

2. Prove that the value of a fraction is unchanged when both the numerator and denominator are either multiplied or divided by the same number. What change really occurs in either case?

3. Reduce to a mixed number, $9 - \frac{2}{3} \times \frac{3}{8} + 1\frac{7}{8} \div \frac{5}{9}$.

4. Add six and four-ten-thousandths and 64.004; diminish their sum by sixty-nine and four ten-thousandths; multiply the difference by four hundredths; divide the product by twenty thousand eighty ten-millionths, and write your answer in Roman characters or by Roman notation.

5. Divide 109 mi. 7 fur. 29 rds. 7 ft. 3 in. by $4\frac{1}{2}$.

6. The longitude of Honolulu is $157^{\circ} 50' 35''$ W., and that of Washington is $77^{\circ} 0' 15''$ W.; when it is 1 a. m., July 4, at Washington, what is the date and hour at Honolulu?

7. What must be the marked price of hats costing \$2.40 so as to gain $16\frac{2}{3}$ per cent., though sold 20 per cent. below marked price?

8. A factor sold wheat on a commission of 4 per cent., and invested the net proceeds in corn, after retaining his commission of 3 per cent. for investing. If his entire commission amounted to \$735, what was the number of bushels of corn purchased, corn being quoted at $33\frac{1}{3}$ cents a bushel?

9-10. On a note for \$9,600 for 1 yr. 6 mos., interest and discount each being 6 per cent., find each of the following: (a) The simple interest; (b) the annual interest; (c) the compound interest, interest compounded semi-annually; (d) the true discount; (e) the bank discount.

ARITHMETIC.

[First Grade Certificate.]

1. A and B can do a piece of work in 18 days, A and C in 12 days, B and C in 9 days; how many days will it take them, all working together?

2. $(7\frac{1}{2} \times \frac{1}{5} + \frac{1}{2}\frac{1}{3}) \div .0005 = ?$

3. A desires to lay out into square lots of the greatest possible size a piece of land $201\frac{2}{3}$ rods long and $41\frac{1}{4}$ rods wide; how many lots will there be?

4. A sold a consignment of cotton on 3 per cent. commission, he invested the proceeds in city lots, after deducting his purchase commission of 2 per cent. His whole commission was \$265; what was the price of the city lots?

5. If 248 men, in $5\frac{1}{2}$ days of 12 hours each, dig a ditch of 7 degrees of hardness, $232\frac{1}{2}$ yards long, $3\frac{2}{3}$ yards wide, and $2\frac{1}{3}$ yards deep; in how many days of 9 hours each, will 24 men dig a ditch of 4 degrees of hardness, $387\frac{1}{2}$ yards long, $5\frac{1}{4}$ yards wide, and $3\frac{1}{2}$ yards deep?

NOTE.—Use cause and effect rule, and cancellation.

6. What sum must be invested in stock bearing $6\frac{1}{2}$ per cent. interest at 105 to produce an income of \$1,000 annually?

7. A cube immersed in a rectangular reservoir 36 inches long and 16 inches wide raises the water 3 inches; what is the edge of the cube?

8. A commission merchant received 35,000 bushels of oats, which he sold at 32 cents per bushel. He was instructed to invest the proceeds, together with \$4,000 cash sent him, in prints at $5\frac{1}{2}$ cents per yard. If his commission, both for buying and for selling, was 2 per cent., how many yards of prints did he buy?

9. At a mark a cubic foot, what was the cost in United States money, of a solid cylindrical stone road-crusher, 6 ft. 6 in. long, and 5 ft. 4 in. in diameter?

10. What will it cost in United States money to gild a sphere 2 feet in diameter at one-half franc a square inch?

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. (a) Into what classes are common nouns divided?
(b) Name all the properties of nouns.

2. (a) Give the plurals of: Wharf, cherub, crisis, Miss Ley, p. (b) Give the feminines of: Czar, testator, earl, peacock, sultan.

3. Write the possessive case, singular and plural, of: Lily, son-in-law, goose, ox, which, Knight-Templar, thief, poetess, child, thou.

4. Define four classes of pronouns, and name two of each class.

5. Compare the following: Fine, peaceable, witty, hot, ill, fore, out, much, nimble, forth.
6. Give all the classes of verbs: (a) As to form; (b) as to meaning. (c) Name all the modifications of the verb.
7. Write the synopsis with *thou* of the verb *see* through all modes and tenses of the passive voice.
8. Diagram and analyze:

"He who from zone to zone,
Guides through the boundless sky the certain flight,
In the long way that I must tread alone,
Will guide my steps aright."
9. Parse in full the italicized words in the following:
 - (a) Not a word of *that*, if you please.
 - (b) It is believed by *many that* bribery *was* used.
 - (c) Is he *as* wise *as* Solomon?
 - (d) He has a disposition *worth* a *mine* of gold.
 - (e) *Be* not *like* dumb, driven *cattle*.
10. Separate the following into all of its phrase and clause elements, and tell the kind and what each modifies:

"He liveth long who liveth well;
All else is life but flung away;
He liveth longest who can tell
Of true things truly done each day."

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. Write sentences illustrating the use of: (a) Pronominal adjectives; (b) compound relative pronoun; (c) participial adjectives; (d) infinitive used as a noun; (e) infinitive used as an adverbial modifier.
2. Write or quote a compound complex sentence, both subjects and predicates having clause modifiers.
3. There has always been a question whether men who are reared within the friction of great cities have the better opportunities for development, or whether they may become stronger or more robust from constant communion with the sublimity of nature, where the great peaks lift their faces to the skies and the streams make music as they flow toward the sea.—*Charles E. Fitch*,
 - (a) Select from the above exercise and write in a column the following: An adjective phrase; an adverbial phrase; an adverb that modifies another adverb; a predicate noun; two adjectives in the comparative degree, one compared by means of a suffix, the other by means of an adverb; a relative pronoun; an intransitive verb; a verb in the potential

mode; two correlative (corresponding, alternate) conjunctions.

4. (a) Give all the modifications of an active transitive verb. (b) Write the synopsis with *thou* of the verb *see* in the passive voice of all modes and tenses.

5. Diagram or write the full analysis of the following:

"He prayeth best who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all."

6. Parse in full the words in italics in the following:

(a) "*What* with entreaty, *what* with threatening, I succeeded."

(b) "That is *worth while*."

(c) "Woe *worth* the day."

(d) "I took him for better or *worse*."

(e) "Forgive me *just this once*."

7. Write a sentence containing all the parts of speech.

8. Write the principal parts of: Lie, sow, bear (carry), hew, hold, lay, see, shake, strow, strive.

9-10. Correct the syntax in each of the following, and give the reason:

(a) Virgil has often been compared to Homer.

(b) She reads well for a new beginner.

(c) Thou has helped us, and shall we not pay you?

(d) He don't improve much in writing.

(e) Can I speak to Mary?

(f) He is older than me.

(g) Everyone can master a grief but he that hath it.

(h) Who are you looking for.

(i) I will not permit of such conduct.

(j) The jury could not agree in its verdict.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Draw a diagram of the globe, marking thereon the lines which divide it into zones, the latitude of each line, and the width of each zone in degrees.

2. (a) Name four important purposes subserved by the study of geography. (b) Wherein do these determine how the subject should be taught?

3. Name four important rivers in the United States which serve as State boundaries. Name the States thus bounded.

4. Name five of the chief industries of the following sections of the United States: (a) New England States; (b) South Atlantic States; (c) North Central States; (d) Rocky Mountain States; (e) Gulf States.

5. Make the following comparisons between Florida and California: Area; population; climate; physical features; products; wealth; wet and dry seasons; water courses; size of metropolis; animal life.

6. To what countries would you go for large quantities of each of the following: Sugar; coffee; tea; opium; ivory; carpets; silk; sponges; cotton; wheat?

7. Name the European countries now at war and the causes of the same.

8. Give the following facts in regard to Cuba: Area in square miles; population; character of inhabitants; chief products; the reasons why Spain puts such value upon the island.

9. Compare South America and Africa; (a) As to latitude; (b) general outline; (c) character and number of inhabitants; (d) products; (e) general importance to mankind.

10. (a) Name five leading imports to the United States and the countries from which each comes. (b) Five leading exports and the States producing each.

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. Why is short daily practice in composition productive of greater skill in writing well than longer and less frequent exercises?

2. Give four rules for the use of the comma; two for the use of the semicolon; four requisites of a good style.

3. (a) Why is it necessary to paragraph? (b) What should be the relation of each paragraph to the others and to the subject? (c) Of each sentence to the others and to the paragraph?

4. Define and illustrate each: Simile, metaphor, metonymy, synecdoche, vision, epigram, personification, climax, irony, hyperbole.

5. (a) From what sources should pupils get the basis for their composition? (b) Why is an outline important in writing a composition?

6-10. Prepare an outline and write a composition of not less than two hundred words on one of the following subjects:

(a) Bribery in Elections.

(b) Summer Schools for Teachers.

(c) Present Needs of Our Public Schools.

(d) Necessity for Broad Scholarship in a Teacher.

(e) Necessity for Teachers to be Extensive Readers.

RE The Grading Committee will consider the following in valuing the composition: Capitalization, punctuation, spelling, paragraphing, diction, style, value of the thought, and general appearance.

PHYSIOLOGY.

[First Second or Third Grade Certificate.]

1. (a) Illustrate three uses of bone. (b) How could you tie a bone into a knot?

2. Where is each of the following glands located: Lachrymal, sebaceous, salivary, perspiratory, lymphatic?

3. Describe three functions of the skin. Give rules for the care of the skin.

4. Name the organs and juices, and describe the process of digestion till the food becomes chyle.

5. Tell in detail the bad effects of fast eating; of large draughts of ice water while eating.

6. Describe minutely the functions of the liver.

7. (a) Tell the importance of exercise.. (b) When should it be sparing or avoided? (c) What the uses of sleep? (d) Why do children require more than adults? (e) Name four means nature has provided for protecting the eyes,

8. Describe the cerebro-spinal system.

9. (a) Are hypodermic injections of narcotics deleterious? Describe the effects of alcohol on each of the following: (b) The brain; (c) the stomach; (d) the kidneys; (e) the blood.

10. (a) What is the poisonous element in tobacco? (b) Why are cigarettes injurious to a growing boy? (c) What are the effects of breathing expired air? (d) How would you ventilate a schoolroom? (e) How should a bedroom be ventilated?

 Answer all questions concisely, simply show that you have read the work carefully and grasped the idea.

THEORY AND PRACTICE.

(From Hewett's Pedagogy.)

[First. Second or Third Grade Certificate.]

1. (1) What is pedagogy? (2) Name the three "immaterial powers of man." (3) Name and define the four powers of the Intellect. (4) Illustrate the office of each of these by comparing "Knowledge to grain." (5) Give the subdivisions of these four powers as presented in "Scheme II." (Chapters I, II and III.)

2. Define the following: (1) Conscience; (2) The Will; (3) A faculty; (4) Consciousness; (5) Attention.

(Chapter IV.)

3. (1) What is education? (2) Distinguish between learning and education. (3) Illustrate the relation of teacher and pupil by representing the teacher as a "gardener." (4) Illustrate by using the "fence and hedge" that there is no "short cut" to an education. (5) When should special education begin? (Chapter V.)

4. (1) Name ten of the powers of the mind of a child necessary to develop, and for which "Hints on Training" are given. (2) In training the sensibilities, name the five emotions necessary to strengthen. (3) How may a pupil's love for yourself be awakened, and what should be done with the teacher who says, "I never did love children"? (4) How may the "attention of a child" be gained, and how can it not be secured? (5) In developing in a child the emotion of "hatred," what caution should be observed? (Chapters VI-VIII.)

5. (1) Name the most important factor in any school, or system of education. (2) Name three proper motives for teaching. (3) When, and in which "three distinct fields" should be made preparation for teaching? (4) "I spoiled a hatful of eyes in learning"; explain the connection and what pedagogical principle was illustrated by this remark. (5) What objection is urged by "the school-keeper" for not progressing in his profession? (Chapter IX.)

6. (1) Mention four intellectual and four "moral habits" a teacher should cultivate in himself. (2) Stress the importance of a teacher's first day in school, and name six duties pertaining to the "first day's work." (3) Distinguish between "tell, teach and train." (4) Illustrate the latter by using the "blacksmith's" apprentice. (5) Give some advantages of a daily programme of exercises.

(Chapters XI-XIII.)

7. (1) What is the relative importance of management as compared with instruction and training? (2) What should the teacher govern in himself? (3) What is said of corporal punishment, and how it should be administered? (4) Name some of the specific qualities in a teacher essential to good discipline. (5) Mention as many as you can of the twelve principles enunciated as aids to good management. (Chapters XIV and XV.)

8. (1) Give the five essential elements of a good recitation. (2) What is it that prompts the teacher to recite for his pupil? (3) Who does most of the talking in a model recitation? (4) What is said of "leading questions"? (5) What is said of concert recitations, and of asking questions around the class in regular order? (Chapters XXI and XXII.)

9. (1) "Reading is talking from a book"; discuss this in ten lines so as to develop what is true "oral reading," and how it should be taught. (2) When scientifically taught, what two other subjects is a primary pupil learning while learning to read? (3) What does modern education say should be taught, which some of the "old masters considered criminal to catch a child doing"? (4) Does technical grammar, as usually taught, drill in the correct use of the English language? (5) At what stage in a pupil's

education should technical grammar be taken up? (Chapters XXIII and XIX.)

10. (1) How may proper relations between teacher and school officers and parents be secured and maintained? (2) To what account may the teacher turn exhibitions and Friday evening exercises? (3) How may a teacher avoid "shriveling up into a mere pedagogue" in the estimation of practical men? (4) May a teacher play with his pupils? (5) What says Hewett of "Oh, anybody can teach little children"? (Chapter XX.)

 This paper is made long purposely, hoping to invite a careful reading of the book by those who have not digested it. The Grading Committee is instructed to give a rising mark to any examinee who answers ten of the questions fully and well.

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. Why should Civil Government be taught in public schools?

2. Give the three branches of the general government, and tell why it is best to have so many.

3. (a) What body usually elects a President? (b) Who selects this body, and how many representatives has this State in it? (c) What are the three conditions of eligibility to the Presidency?

4. (a) What are the qualifications for United States Senator? (b) Distinguish between Joint and Executive Session. (c) How is a U. S. Senator elected? (d) What change in method is desired and how may it be secured? (e) Who fills vacancies in this office, and under what conditions does such a Senator fail to get his seat?

5. Explain what is meant by impeachment; describe the method and tell which body impeaches.

6. Tell what is meant by the following: (a) A patent; (b) a copyright; (c) felony; (d) piracy; (e) treason; (f) an alien; (g) a naturalized citizen; (h) a passport; (i) imports; (j) tariff for revenue.

7. (a) Distinguish between a territory and a State. (b) Give in brief the duties of executive officers of this State.

8. (a) How many members compose each branch of the Florida Legislature? (b) What the Constitutional limit of the session and per diem of the members? (c) Give the different steps necessary in making a State law.

9. What is meant by each of the following: Writ of habeas corpus; ex post facto law; bill of attainder; a gerrymander; a filibuster?

10. Answer the following in regard to school law:

(a) Who has the power to establish and number a school district?

- (b) Who is authorized to fix salaries and employ teachers, and what is necessary to make both binding?
- (c) Who may vote in an ordinary school meeting? In a subdistrict election?
- (d) What are the sources of State school revenue? What constitutes County school fund?
- (e) What in your judgment constitutes good moral character in a teacher?
- (f) Are certificates or diplomas granted in other States valid in this?
- (g) Between what ages may children legally attend a public school?
- (h) What pupils may be charged tuition, and what must be done with the money?
- (i) What number of hours service constitute a school day? What number of days a school month? Has any Board the right to demand a greater number for a month's salary?
- (j) To whom and how often should a teacher report? What the consequences if he fails to report, or if his report be incomplete or incorrect?

ALGEBRA.

[First Grade Certificate.]

1. (a) Prove that any quantity with a zero exponent equals 1; (b) that $a^{-m} = \frac{1}{a^m}$
2. Factor $x^6 - 1$, $3x^2 + 23x + 14$, and $x^{\frac{3}{2}} - y^6$.
3. Find the G. C. D. of $3x^3 - 4x^2y + 3xy^2 - 2y^3$ and $4x^2 - 7xy + 3y^2$.
4. Find the L. C. M. of $a^2 - 3ab + 2b^2$, $a^2 - ab - 2b^2$, and $a^2 - b^2$.
5. Find the values of x and y , and illustrate three methods of elimination with the equations $3x + 5y = 19$ and $5x - 4y = 7$.
6. Five years ago the age of a father was four times that of his son. Five years hence the age of the father will be $2\frac{1}{2}$ times that of his son. How old is each?
7. Expand by use of the binomial theorem, $(2a^2 + 3bc)^7$.
8. Find the value of x in $\frac{1}{1} \frac{\overline{6x-2}}{\overline{6x+2}} = \frac{4}{1} \frac{\overline{6x-9}}{\overline{6x+6}}$
9. Find the time between 3 and 4 o'clock when the hands of a watch make a straight line.

10. The joint stock of two partners was \$1,000; A's money was in trade 9 months, B's 6 months; when they shared stock and gain, A received \$1,140, and B \$640. What was each man's stock?

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. To what five other sciences is physical geography intimately related?
2. Distinguish between oceanic and continental islands. Illustrate by naming examples.
3. Explain the origin of winds and tides; and account for constant oceanic currents.
4. What are geysers and glaciers? Give the theory of the formation of each.
5. Account for volcanoes and earthquakes, and tell why they are confined to certain sections.
6. What does the history of animal life, as recorded in the rocks, show?
7. Define erosion, fossil, delta, canyon, monsoon.
8. Explain why mountain tops under the direct rays of a tropical sun are covered with snow; and tell what purposes such mountains subserve.
9. What is snow, hail, dew, rain, frost?
10. Account for the origin of coal; of coal oil.

SEPTEMBER, 1897.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. (a) Distinguish between the merits of oral and written spelling. (b) Give reasons why neither should be discarded altogether.
2. Unite the following and give the rule for spelling in each case: Blame—able, charge—able, pale—ness, true—ly, busy—ness, duty—ous, spry—ly, snob—ish, prefer—ed, benefit—ing.
3. Syllabicate and mark diacritically the vowel in the accented syllable only: Inventory, dolorous, quinine, decade, idea, inquiry, abdomen, bicycle, towards, horizon.
4. Form a derivative word by using each of the following as a suffix, and illustrate the meaning of each suffix: En, dom, ness, ism, ity, cle, ling, able, ary, ous.

5. Define each word formed by uniting in order to a root a prefix meaning: From, not, towards, beyond, with, between, down, before, around, half.

6. Write a paronym of each of the following: Man, principle, pendant, corporal, stationary.

7. Write and define a homonym for each of the following: Need, rabbit, corps, seller, quire, cygnet, bald, bruise, fame, plain.

8. Write in order a synonym of each of the following: Custom, invent, dexterity, prolific, antique, revolt, rough, eminent, misfortune, accelerate.

9-10. If wrong, correct the spelling of the following: Eezle, domisil, effeet, desendant, silinder, demagog, fik-tishus, catapiller, manicle, etomology, ekstacy, elemosinary, aleet, Eskimo, effishent, indelable, rhinoceros, satalite, sintillate, hypokracry.

READING.

[First, Second or Third Grade Certificate.]

1. Name five other branches that should be taught in connection with the reading lesson.

2. What two ordinary school appliances does the scientific teacher of primary reading use more than chart or primer?

3. (a) Define reading. (b) Distinguish between silent reading and oral. (c) Distinguish between teaching reading and a process of word calling. (d) Would you begin with script or print with a primary class in reading? (e) Give reasons for your last answer.

4. (a) Distinguish between the word method, phonic, sentence, and letter methods. (b) When should the phonic method be dropped?

5. (a) Make an outline analysis of how you would teach a class in the Second Reader, which had been properly taught in the First. (b) What changes would you make in your method and objects in teaching an advanced reading class?

6-8. Read for your examiner a paragraph of prose.

9-10. Read an extract of poetry.

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. Tell from whom and how the United States obtained the territory embraced within each of the following States: Louisiana, Ohio, Florida, California, Alaska.

2. (a) When and by whom were negroes introduced into the United States? (b) When and by what authority was the slave trade prohibited?

3. Recall the peculiar circumstances of the Presidential elections of 1800 and 1824, and tell wherein they differed from the contest of 1876.

4. Tell all you know of each of the following: (a) The "Hartford Convention"; (b) the Nullification Ordinance.

5. In what consists the chief difference between the New England and the Southern conception of the U. S. Constitution?

6. What is meant by the following: (a) Tariff for revenue? (b) Reciprocity? (c) Free Silver? (d) Civil Service? (e) Free Trade?

7. Couple the name of the inventor with five of the most important American inventions.

8. In pleading for what cause did each of the following render himself famous as an orator: Samuel Adams, Wendell Phillips, Daniel Webster, John C. Calhoun, Benj. H. Hill?

9. Name the States admitted into the Union since the Civil War.

10. (a) What did President McKinley do immediately after he came into office? (b) What law has just been passed in consequence of his action?

UNITED STATES HISTORY.

[First Grade Certificate.]

1. (a) What of the Mound Builders? (b) What evidence can you give to prove that they were not the ancestors of the Indians?

2. Upon what basis did each of the following lay claim to lands now in the United States: (a) Spain; (b) France; (c) England; (d) Holland?

3. Write a sketch of Washington's administration, noting: (a) His foreign policy; (b) the notions of the people in regard to the government; (c) the rise of political parties; (d) condition of home affairs on assuming the presidency; (e) condition on his retiring from office.

4. Discuss the "Doctrine of State Rights" in the light of the following: (a) Kentucky and Virginia resolutions; (b) Massachusetts Legislature relative to the war of 1812; (c) the "Hartford Convention"; (d) the Nullification Ordinance of South Carolina; (e) the Ordinance of Secession.

5. Distinguish between the "Virginia Plan" and the "New Jersey Plan" in the U. S. Constitutional Convention.

6. Trace briefly the financial policy of the United States from Alexander Hamilton to Wm. McKinley.

7. Tell why each of the following became distinguished in American history: Wm. H. Prescott, Elias Howe, Charles Sumner, William Cullen Bryant, Eli Whitney.

8. What do the stars and what the stripes signify in our flag? When was this flag first used?

9. Name the great political parties of today, and give the distinguishing features in the platform of each.

10. Tell what you know about the circumstances which each of the following suggests: (a) Weyler; (b) Klondike.

ARITHMETIC.

[Second or Third Grade Certificate.]

1. If $\frac{3}{4}$ of $4\frac{1}{2}$ bushels of beans cost \$5 $\frac{2}{3}$, what will $\frac{3}{4}$ of $\frac{2}{3}$ of 20 bushels cost?

2. (a) $\frac{7}{8} - \frac{3}{4} \times \frac{2}{3} + 4\frac{5}{6} \div 3\frac{2}{9} + 4\frac{7}{8} = ?$

(b) $(\frac{7}{8} - \frac{3}{4}) \times (\frac{2}{3} + 4\frac{5}{6}) \div (3\frac{2}{9} + 4\frac{7}{8}) = ?$

3. Multiply 16 by sixteen hundredths, divide the product by sixteen ten-thousandths and express the quotient by Roman notation.

4. (a) What is the value of the wheat, at \$1 $\frac{1}{8}$ a bushel, in a box 10 $\frac{1}{2}$ ft. long, 5 $\frac{1}{3}$ ft. wide, and 6 $\frac{1}{4}$ ft. deep, the box being level full. (Use approximate rule in gauging the box.)

(b) If a cask containing $\frac{1}{10}$ the capacity of the above box is half full of wine, what will be its value in U. S. money at 10 francs a gallon?

5. A teacher invests \$200 in books at 33 $\frac{1}{3}$ per cent. below list price and sells them to his students at 16 $\frac{2}{3}$ per cent. above list price; what per cent. does he make on his investment?

6. A trader sells two horses for \$100 each; on one he gains 20 per cent., on the other he loses 20 per cent. Did he gain or lose, and what per cent. on both horses?

7. Divide 2 sq. mi. 120 A. 8 sq. ch. 12 P. 500 sq. l. equally between 8 heirs. (Do not reduce the whole to square links.)

8. Find the square root of the third power of 1.6 correct to four decimal places.

9. (a) A receives a semi-annual income of \$180 from Florida 6's; what was his total investment in bonds if they were quoted at 110 $\frac{1}{2}$, brokerage $\frac{1}{4}$ of 1 per cent.? (b) What annual rate does the investment pay if the interest for the first half of each year is immediately loaned at 1 per cent. a month?

10. If a tank 6 ft. long, 3 ft. wide and 2 ft. deep contains 4 $\frac{1}{4}$ hogsheads of water, how deep must a tank be that is 8 ft. long and 5 $\frac{1}{3}$ ft. wide to contain 22 $\frac{2}{3}$ hogsheads of water?

ARITHMETIC.

[First Grade Certificate.]

1. B sells $\frac{1}{4}$ of his cattle to A, $\frac{2}{5}$ to C, $\frac{3}{7}$ of the remainder to D, and finds that 48 head is $\frac{3}{16}$ of what he has left. How many cattle had he at first?

2. Seven men start together around an island 120 miles in circumference, each walking 5, $6\frac{1}{4}$, $7\frac{1}{3}$, $8\frac{1}{4}$, $9\frac{1}{2}$, $10\frac{1}{4}$ and $11\frac{1}{4}$ miles an hour respectively. In how many days will they all be together again, if they walk 12 hours a day?

3. The sides of a triangular lot are $115\frac{1}{2}$ ft., $128\frac{1}{3}$ ft. and $134\frac{3}{4}$ ft. respectively. How many boards will it take, and what will it cost to fence it with lumber at $\$7\frac{1}{2}$ per M., the longest boards possible being used, and the fence being 5 boards high, the bottom one 10 in. wide, two 6 in. wide, and the others 4 in. wide?

4. A and B are partners. A's capital is to B's as 5 to 8; at the end of 4 months A withdraws $\frac{1}{4}$ of his capital and B $\frac{2}{3}$ of his. At the end of the year their whole gain is \$400. how much of the gain does each get?

5. A grocer bought 36 bu. 3 qt. of nuts at \$3.20 a bushel, and sold them at 12 cents a liquid quart. Did he gain or lose, and how many dollars?

6. At what per cent. below par must $4\frac{1}{4}$ per cent. stock be quoted, to yield the same per cent. on the investment as $5\frac{3}{4}$ per cent. stock at a premium of $23\frac{1}{2}$ per cent., brokerage $\frac{1}{8}$ per cent. in each case?

7. At Washington, 77 degrees west longitude, it is 12 minutes past 7 p. m., while it is 2 p. m. on the Sandwich Islands; what is the longitude of the Sandwich Islands, and are they east or west of Washington?

8. A square lot is bordered by a walk 1 yd. wide, the lot and walk together occupy $2\frac{1}{2}$ acres; find the cost of paving the walk at 25 cts. a sq. yd.

9. If a sphere 2 ft. 1 in. in diameter weighs 3,125 lbs., what is the diameter of one of the same material weighing 819.2 lbs.?

10. Find by approximate rule the number of bushels of grain in a conical vessel whose base is 8 ft. in diameter and altitude 4 ft.

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. Write both the possessive singular and plural of the following: Miss Ley, sister-in-law, countess, chimney, solo, deer, ox, who, it, x.

2. Decline in both numbers each of the simple personal pronouns.

3. Write all the participles and infinitives, both active and passive, of the verb love.

4. Compare the following; Little, able, pretty, beautiful, infinite, near, far, much, holy, wholly.

5. Give all the properties and the order of stating them in parsing (a) The noun; (b) the verb.

6. Diagram this sentence: This examination will be easy for those teachers who habitually prepare the lessons before attempting to teach them.

7. Write the synopsis with *he* of the verb *am* in all moods and tenses.

8. Parse in full every word in the sentence: He got what he deserved.

9. Give complete analysis of the following, and parse in full the words in italics:

"The patriot, *whom* the corrupt tremble to see *arise*, may well feel a grateful satisfaction in the *mighty* power which heaven has delegated to him, *when* he thinks that he has used it for *those* purposes only which heaven approves."

10. Correct each of the following and give the reason:

(a) Each woman brought their work with them.

(b) My mother she thinks I am too young.

(c) That couple are very devoted to one another.

(d) It never has and never can be done.

(e) He acts like he was sick.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. Parse in full the words italicized in the following:

"Greatly *pleased*, the sturdy warrior lifted his own hat, and said, 'I honor the man or boy *who* can be neither bribed nor *frightened* into *doing wrong*. With an army of such soldiers, I could conquer *not only* the French, *but* the world;' and, *handing* the boy a glittering sovereign, the old duke put spurs to his horse and galloped away."

2. Account for all the marks of punctuation in the above.

3. Give the two principal clauses in the above quotation.

4. Select and classify all the object complements in the above quotation.

5. Make in order a list of all of each in the above: (a) Adjective elements; (b) adverbial elements.

6. Write the synopsis in the passive voice of the verb *cheat* with *he* in all moods and tenses.

7. Write a sentence with an infinitive used: (a) As a noun; (b) as an appositive; (c) as an adjective; (d) as an adverb; (e) as an object complement.

8. Diagram or analyze:

"The crow doth sing as sweetly as the lark
When neither is attended; and I think
The nightingale, if she should sing by day

When every goose is cackling, would be thought
No better a musician than the wren."

9-10. Correct each of the following, if wrong, and give the reason for each change :

- (1) It is he and not I that is to blame.
- (2) Those kind of sentences are confusing.
- (3) Would you strike your wife—her who has always been so devoted to you ?
- (4) It is natural for every one to esteem their own best.
- (5) He looks bad, and I feel badly.
- (6) If we study the science of teaching we will teach well.
- (7) He intended to be there.
- (8) It has laid there for a week.
- (9) Can I leave the room ?
- (10) He died with yelow fever.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. (1) Give the number of great circles extending north and south; (2) the number east and west. (3) Give reasons for your answer.

2. Mention the States through which a car of salt must pass by a direct route from Salt Lake City to Boston.

3. Name the provinces of Canada and the chief industries of each.

4. Name the leading industry of the following: Omaha, Milwaukee, Augusta (Ga.), Cleveland, Pittsburg.

5. (1) Name the longest and the shortest day in the year. (2) Explain why each is so.

6. Give the names of all the principal divisions of land and water crossed by the equator.

7. Give proofs that the earth rotates on its axis from west to east.

8. Name all the governments of Europe, and the metropolis of each.

9. Tell the following of Cuba: (1) Between what parallels; (2) area in square miles; (3) climate; (4) productions; (5) races and character of the people.

10. Draw a township, number its sections, subdivide the 16th as much as is necessary to place a cross (X) in the $SE\frac{1}{4}$ of $SE\frac{1}{4}$ of $NW\frac{1}{4}$.

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. (a) Name the most general use of composition. (b) Give the six parts of a formal letter.

2. Write a formal letter of at least five lines to some firm in New York, in which all of the six parts are properly located, capitalized, punctuated, and signed by a fictitious name.

3. Give rules for using direct, indirect and divided quotations, and for paragraphing.

4. Discuss diction, and give rules for acquiring elegant diction.

5. Give your ideas how and how often composition exercises should be conducted in every school.

6-10. Make a topical outline of not less than five heads, including the introduction, discussion and conclusion, and write a composition of not more than 300 words on one of the following subjects:

(1) The Use and Abuse of Examinations.

(2) The Schoolmaster's Place in Society.

(3) The Pleasures of a Well Informed Mind.

(4) The Value of County Institutes and Summer Schools.

(5) Why the Rich are Influential.

NOTE.—In grading the composition consider the orthography, capitalization, punctuation, paragraphing, diction, the value of the thought expressed, and the general appearance.

PHYSIOLOGY.

[First, Second or Third Grade Certificate.]

1. (1) Of what service is the skeleton? (2) How is the spinal cord formed, and what purpose does it subserve? (3) What is the composition of bone? (4) How many in the body? (5) Name some of the most important ones.

2. (1) Name the two grand divisions of muscles. (2) Describe their structure and give the uses of each class. (3) Describe and tell the office of tendons. (4) Give the name and office of the largest tendon in the body. (5) Considering the muscles, what is the value of exercise and rest?

3. (1) Describe the structure of the skin. (2) Tell six functions of the skin. (3) What is the value of bathing; the kind; the time for it? (4) Why is clothing necessary? (5) Give the disadvantages of too tight, too heavy, unclean, wet, cheaply dyed clothing.

4. Name all the organs, and describe the whole process of digestion, including the action of all fluids until the food enters circulation or becomes tissue.

5. (1) What is food in a physiological sense? (2) Organic food is divided into what two general groups? (3) What are chemical constituents of each group? (4) From what sources are each of these constituents found in the greatest abundance? (5) Name the inorganic foods, and tell why each of the following is needed: Lime, phosphorus, iron and the alkalis.

6. Tell to which class, the albuminoid or carbonaceous, each of the following belongs, and its value as a food product: Fish, milk, butter, eggs, wheat bread, sweet potatoes, peas, apples, onions, mustard.

7. How do alcoholic stimulants affect each of the following: Heart, liver, kidneys, brain, and nerves?

8. (1) Can the evil effects of it be transmitted by parent to child? (2) Why are malt liquors and light wines dangerous? (3) Give some of the evil effects of tobacco, especially upon the young. (4) Name some of the narcotics, and tell what effect they have upon the system.

9. What is most likely to induce sunstroke, what the symptoms, and what should be the treatment if no physician is near?

10. Discuss the evils of bad cooking and the value of right cooking.

THEORY AND PRACTICE.

Questions on White's School Management, first 150 pages.

[First, Second or Third Grade Certificate.]

1. What, says the author in the preface, are the two most obstructive foes of needed progress in school training?

2. (1) What serves as "a guide in practice" in determining the best means and methods of teaching? (2) What is said of "test of devices"? (3) of "worthlessness of scores of devices"? (4) What is the end of school discipline? (5) Name the six topics to be considered in a practical treatment of school government.

3. Name the seven essential "elements of governing power."

4. (1) What does the teacher need more than "personal magnetism" and "natural aptitude"? (2) Give reasons for the necessity of "daily study," and quote the reason of Dr. Arnold, of Rugby, why he did it.

5. Give in brief the argument used under the subheads; (1) "Acquisition of skill"; (2) "Individuality"; (3) "Crank turning"; (4) "Teacher's personal example"; (5) "Teacher's spirit."

6. What law would the author, if he had the power, write over every schoolroom door?

7. Name six "requisite qualifications," which are "conditions of easy control."

8. (1) Give the author's distinction between a "condition" and a "device" in school government. (2) Name the four "mechanical devices." (3) Give a kind of synoptical brief of the arguments advanced for the adoption of each of the above devices.

9. Name "the seven school virtues" of every well ordered school.

10. Under the head, "School Incentives," give in order the "royal nine."

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. Distinguish between four different forms of government.

2. Describe briefly each of the "four groups of rights."

3. (a) Explain what is meant by Magna Charta; (b) the origin of taxes.

4. (a) What is meant by the supreme law of the United States? (b) Describe the three departments of government for which it provides.

5. (a) What is the necessity for political parties? (b) Name all the conventions necessary to secure a nominee for President. (c) Give some of the benefits and some of the evils of the convention system. (d) Which is the most important in the system of conventions?

6. (a) What is a State? (b) Name the departments of a State government. (c) Give in brief the duties of the Administrative officers of this State. (d) Give the number of State Senatorial districts and the number of lower house or assembly districts, in this State. (e) Tell how a territory becomes a State.

7. (a) How did it happen that Congress was composed of two houses? (b) For how long, and who elect members of each house? (c) What are the qualifications for membership in each? (d) How are vacancies in each house filled?

8. Give the Executive Departments of the Federal Government.

9. (a) What was the object of "The Australian Ballot System"? (b) Give the main features of it.

10. (a) Who is a school patron? (b) Who are qualified electors in choosing a school supervisor? (c) State the duties of a supervisor. (d) Who has the authority to form school districts and to assign teachers? (e) What is meant by the one mill tax, and what is done with it?

ALGEBRA.

[First Grade Certificate.]

1. Simplify $(a^2+b^2+c^2+2ab+2bc+2ac) \div (a-b-c)$.
2. A man walking 4 miles per hour has 30 minutes the start of a boy on a bicycle. How many miles per hour must the boy go in order to overtake the man in 20 minutes.
3. Give the prime factors of the following:
 m^3-n^3 , a^3+n^3 , a^8-b^8 , p^4+p^2+1 , $n^2-2no+o^2$.
4. Of the following quantities, x^4-2x^3+6x-9 , $6x^4-4x^3-16x^2+12x-6$ find: (a) G. C. D.; (b) L. C. M.
5. A and B, in a game of baseball, are each at the bat 15 times. B makes 2 hits to A's 1, and A gets out $1\frac{1}{2}$ times as many times as B. Find the number of hits and outs of each, supposing each gets out when he does not make a hit.
6. Raise $2a^2+4b^3$ to the 7th power by the binomial theorem.
7. Multiply $(x-y)^{\frac{2}{3}}$ by $(x+y)^{\frac{3}{4}}$.
8. Find the values of x in $x-1=2+\frac{2}{\sqrt{x}}$
9. Find the values of x and y :

$$\frac{1}{x} - \frac{1}{y} = 3; \quad \frac{1}{x^2} - \frac{1}{y^2} = 21$$
10. A man purchased a field, whose length was to its breadth as 8 to 5. The number of dollars paid per acre was equal to the number of rods in the length of the field; and the number of dollars given for the whole was equal to 13 times the number of rods round the field. Required the length and breadth of the field.

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. Of what does physical geography treat?
2. (1) Explain the cause of night and day. (2) The causes of the changes of seasons.
3. Distinguish between maps of the earth on the following projections: (1) Mercator's; (2) equatorial; (3) polar; (4) conical.
4. Give proofs of the present heated condition of the interior of the earth.
5. (1) What is an atoll? (2) What does their existence in any part of the earth prove?
6. (1) How are tides caused? (2) Distinguish between ebb, flood, spring, and neap tides.
7. (1) Give proofs that the greater weight of the atmosphere lies within a few miles of the earth's surface. (2) Explain the origin of winds.

8. Give the characteristic fauna of the following: (1) North America; (2) South America; (3) Australia; (4) Greenland; (5) Cuba.

9. (1) Distinguish between vertical and horizontal distribution of vegetation. (2) What are the conditions requisite for forests?

10. Tell the following of Alaska: (1) Its area; (2) its principal islands; (3) its principal trees; (4) its principal animals; (5) describe the river system of the Yukon.

JUNE, 1898.

ORTHOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Define: Orthography, primitive word, derivative word, prefix, suffix.

2. Unite each of the following primitive words with the suffix, and give the rule for the spelling: Close—ure, singe—ing, charge—able, plan—ing, fancy—ful, differed, prefer—ed, plenty—ous, red—en, model—ing.

3. Separate the prefix and the root in the following derivatives and write after each prefix its meaning: Abed, afternoon, belittle, midsummer, misname, withstand, unkind, outstrip, disobey, foresight.

4. Form a derivative by using each of the following as a prefix or suffix, and define each word formed: Age, ery, cule, dom, fule, ish, ity, ment, ness, post.

5. Write the following and opposite each a homonym: Rude, sear, surf, serge, auger, throw, team, suite, root, strait.

6. Syllabicate and mark diacritically the vowel in the syllable primarily accented in each of the following: Inventory, financier, ally, gratis, apparatus, sinecure, recess (noun), agriculture, abdomen, alternately.

7. Form ten derivatives by using as a prefix or suffix each of the following, once only, meaning: One who, across, times, between, like, against, little, without, full of, made of.

8-10. Spell correctly: Damning (obstructing), bulitin, census (enumeration), reserrection, restorant, separation, malliable, privilege, corister, pregudice, hipokrit, projeny, orkestra, kleek, missle.

READING.

[First, Second or Third Grade Certificate.]

1. Name in order the steps you would pursue in teaching a beginner to read.
2. When a class has reached the Fifth Reader, state what you aim to accomplish by the reading exercises, and how you would conduct a recitation.
3. Name the necessary qualifications of a successful teacher of reading.
4. What other subjects should be taught in connection with reading?
5. Name the books you have read that have been especially helpful in directing you how to teach reading.
6. Read for the examiner, without previous knowledge of what you would read, a paragraph of prose.
7. Read for the examiner, he selecting the piece, one or more stanzas of poetry.

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. Tell what you know of "The Starving Time," and what followed in the early history of the country.
2. Relate the story of the sending of wives to Virginia.
3. What of "bond servants," "redemptioners" and slaves, in the colonies.
4. Tell the history of Patrick Henry, and his part in precipitating the Revolutionary War.
5. What forms of religious worship were established by law in different sections before the Revolution? To whom is the country indebted for religious freedom, free speech, and a free press?
6. (a) Give an account of the United States navy in the war of 1812. (b) Give an account of the battle of Bladensburg and the subsequent results.
7. Why is each of the following celebrated in history: Arnold, Ethan Allen, John Endicott, Roger Williams, Lafayette, Daniel Boone, Alex. Hamilton, Washington Irving, Alex. H. Stephens, Admiral Dewey.
8. Describe the Civil War from Bull Run to Gettysburg.
9. Relate the history of the term, "The Greater New York."
10. Tell the causes of the present war with Spain.

UNITED STATES HISTORY.

[First Grade Certificate.]

1. What are the chief benefits to be derived from the study of history, and what subjects should be taught in connection with it?

2. Give the principal epochs in the history of what is now the United States.

3. Distinguish between the Provincial, Continental and Federal Congresses.

4. Give the meaning and origin of each of the following political terms: Loco-focos, Nullification, Free Soilers, Know-nothings, Underground Railroad, Secession, Southern Confederacy, Emancipation, Carpet-baggers, Mugwumps.

5. (a) Who enunciated the doctrine, "To the victors belong the spoils"? (b) What is meant by "Civil Service Reform"? (c) Under whose administration was the latter inaugurated? (d) What is likely to be the outcome of it?

6. What is meant by the "Monroe Doctrine"? What recent occurrence made this question prominent again? Explain.

7. Write five questions you would ask a class about the "Dred Scott Decision."

8. Give a brief sketch of the first one of each in the United States: (a) Railroad; (b) steamboat; (c) newspaper; (d) telegraph; (e) cotton gin.

9. What do you understand by the "Resumption Act" of 1879; the Sherman Silver Bill repealed by special session of Congress in 1893?

10. What do you understand by "the free and unlimited coinage of silver at the ratio of 16 to 1"?

ARITHMETIC.

[Second or Third Grade Certificate.]

1. (a) Express in words, 605006. (b) Write in figures: Eight hundred trillion, eight billion, eight million, eight hundred thousand, eighty. (c) Write: Fifty-five thousand eight hundred sixteen dollars, five cents. (d) Express by Arabic notation: $\overline{\text{XDCCCXXII}}$. (e) Express one million by Roman notation, using one letter.

2. $4+11 \times 3 - (5+28 \div 4+24) \div 6 = ?$

3. Write all the prime factors of 4862.

4. A can walk around a race-course in 12 min., B in 15 min., and C in 18 min. If they start together and keep walking each at his own rate, how many minutes will elapse before they are all three together at the starting-point, and how many times will each have made the circuit?

5. The pendulum of one clock makes 25 beats in 28 seconds, and that of another clock 30 beats in 34 seconds. If the clocks are started at the same moment, when first after starting will the clocks beat together again?

6. What is the exact value of

$$\left\{ 3 + 2\frac{1}{2} - \frac{3}{4} \text{ of } \frac{6}{5} + \frac{4}{3} \right\} \div 4\frac{1}{3} ?$$

7. When it is noon at Philadelphia it is 10 min. past 5 o'clock p. m. at Paris. What is the longitude of Paris, the longitude of Philadelphia being $75^{\circ} 10'$?

8. Find, by using approximate measurement, how many feet high a box 5 ft. square must be made to hold 100 bushels of rice.

9. After getting a note, without interest, discounted at a bank for 3 mo. at 6 per cent., I had \$354.42. What was the face of the note?

10. A man purchased a horse, giving in payment his note at 6 per cent. At the end of 3 years and 6 months he found that he owed \$42 interest. How much did the horse cost him?

ARITHMETIC.

[First Grade Certificate.]

1. A farmer brought to market 3 jars of butter, weighing 27, 29, and 40 pounds respectively. The empty jars weighed $4\frac{1}{3}$, $4\frac{8}{9}$, and $7\frac{1}{4}$ pounds. The butter was sold for \$28. Give the price per pound in the fraction of a dollar.

2. Reduce $\left\{ \frac{2\frac{3}{4}}{\frac{4}{3}} \div \frac{3\frac{1}{3}}{\frac{1}{4}} \right\} \times \frac{8}{9} + .01$ to a decimal. Give answer correct to six decimal figures.

3. Find the value in U. S. money of the contents of a purse containing 35 sovereigns, 27 half-sovereigns, 13 crowns, 41 half-crowns, a guinea, and a shilling.

4. Express .65 of a pint as a decimal of a bushel.

5. Fifteen persons agree to purchase a tract of land, but three of the company withdrawing, the investment of each is increased \$150. What does the land cost?

6. If the assessed valuation of a town is \$2,360,000, and the town has 640 polls, paying \$1.50 each, what must be the rate of taxation in order to raise \$10,400?

7. What is the difference between the present worth and proceeds of \$560 due in 2 yr. 6 mo., at 6 per cent.?

8. If 5 horses eat as much as 6 cattle, and 8 horses and 12 cattle eat 12 tons of hay in 40 days, how much hay will be needed to keep 7 horses and 15 cattle 65 days?

9. If a globe of gold 1 inch in diameter is worth \$120, what is the diameter of a globe of gold worth \$6400?

10. If a child should receive 1 cent at birth, 2 cents on the second birthday, 4 cents on the third, etc., how much would he be worth when 21 years of age?

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. (a) Distinguish between practical and technical grammar. (b) Tell which should be taught first, and give reasons for your answer.

2. Separate the following into all of its propositions, clauses and phrases, classify, and tell what each modifies:

“Nobody knew how the fisherman brown,
With a look of despair that was half a frown,
Faced his fate on that furious night,
Faced the mad billows with hunger white,
Just within hail of a beacon light
That shone on a woman fair and trim
Waiting for him.”

3. Parse in full in the above sentence: How, that (wherever it appears), with (both), faced (second), half, knew, just.

4. Write each part of speech and after it as a head, in the order of stating them in parsing, all the properties and accidents to which each is subject.

5. (a) Only what kind of verbs may have a passive voice, and why? (b) How is the passive voice of every verb formed?

6. Write a short sentence and illustrate each of the following uses of the infinitive: (1) As the subject of a sentence; (2) as the object of a verb; (3) as the object of a preposition; (4) as the complement of a verb; (5) as a noun appositive; (6) as an adjective; (7) as an adverb.

7. Write a short sentence in which a noun clause is used: (1) As the subject of a sentence; (2) as the object of a verb; (3) as the object of a preposition; (4) as a complement of the verb *be*; (5) as an appositive.

8. Write two sentences and illustrate the difference between restrictive and non-restrictive clauses.

9. (a) Give four classifications of sentences. (b) What determines the classification of words, phrases and clauses?

10. (a) Which two parts of speech, besides conjunctions, may connect; and what is each of them called? (b) Illustrate each by a sentence.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. (a) What does English Grammar teach? (b) How should pupils be taught the subject for two or three years preparatory to taking up technical grammar?

2. In beginning grammar, should the sentence and its elements, or the parts of speech and their properties and accidents, be taught first? Why?

3. (a) Name and define the different kinds of sentences. (b) Write a declarative sentence and change it into each of the other kinds.

4. (a) Define inflection. (b) When is it called declension; when comparison; when conjugation?

5. Decline: I, thou, thyself, which, man-of-war.

6. Give the rule and compare each of the following: Hot, cheerful, sincere, able, capable, angry, fore, well, worldly, much.

7. Copy the following, and write opposite each its plural: Army, turkey, tax, thief, brief, *, solo, son-in-law, forget-me-not, Knight-templar.

8. Write the synopsis with *thou* of the verb *drive* in the passive in all moods and tenses, and give all forms of the infinitive and participles.

9. Make a list of all the propositions, clauses and phrases, stating what each modifies and the kind of element it is, in the following sentence:

"We can not perceive that the study of grammar makes even the smallest difference in the speech of people who have always lived in good society."

10. Parse in full the italicized words in the following sentences:

(1) *Whoever* studies *will* learn.

(2) *Every* good gift is from *above*.

(3) He is *all* awry, for his reputation is his *all*.

(4) Be not *like* *dumb*, driven cattle.

(5) *Than* whom, Satan excepted, *none* higher sat.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. Of what use are parallels of latitude and meridians?

2. What cities in the United States are in about the same latitude as Madrid?

3. (a) Give approximately their number, their combined area and the population of the Phillipine Islands.

(b) Give the latitude and longitude of Manila.

4. (a) What are zones? (b) Give the width of each in miles.

5. Name ten important rivers of the Mississippi river system.

6. Name in order the five nations that have the largest population.

7. What is the distance, and through what waters would you sail from Gibraltar to Manilla?

8. Give the following in regard to Cuba: Length, average width, area in square miles, climate, character of soil, chief products, number of inhabitants and their character, chief exports and imports.

9. Locate Mexico. How many states compose the republic? What is its area? What is the character and number of its population? What are its chief exports and imports?

10. Name all the governments in South America with their capitals. State approximately their combined population. What countries have furnished the greater part of the South American population? What language is principally spoken in each government?

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. What advantage to composition are written recitations? Should they be more frequent, more carefully corrected, and copied?

2. What of the nature of the subjects, and at what period in a child's education should composition work begin?

3. Elaborate upon the benefits of the following as introductory to composition: (1) Conversation lessons; (2) copying exercises; (3) oral and written descriptions of pictures and familiar objects; (4) committing choice extracts.

4. A knowledge of the following being indispensable in composition, when and how should their use be taught: (1) Capital letters; (2) punctuation; (3) use of words; (4) use of sentences; (5) figures of speech?

5. Name briefly ten instances when words should begin with capitals.

6. (a) Name all the marks of punctuation in general use. (b) Write five rules for the use of the comma.

7. Write ten cautions to be observed in the selection of words.

8. Give five general rules to be observed in the construction of sentences.

9. Name and illustrate the use of five of the figures of speech in most common use.

10. (a) What is the value of paragraphing? (b) Give some rules for paragraphing.

11. After preparing an outline, write a composition, at least one foolscap page in length, on one of the following subjects:

- (1) The Use and Abuse of School Examinations.
- (2) Teachers' Uniform Examinations.
- (3) The War with Spain.
- (4) The Necessity of Ripe Scholarship in a Teacher.

PHYSIOLOGY.

[First, Second or Third Grade Certificate.]

1. Describe all the bones of the trunk.
2. Give the physiological reasons why a child's feet should not be allowed to dangle from a high seat.
3. Explain the uses and structure of the muscles.
4. Describe and state the uses of the perspiratory glands.
5. Name the organs of respiration and tell how we breathe.
6. Give reasons for schoolroom ventilation, and tell how it may best be done.
7. Describe the heart and explain its movements.
8. Tell the effects of alcoholic drinks and narcotics upon circulation; the heart; the blood; the lungs.
9. Trace the food from the mouth to the small intestines and describe the whole process of digestion, explaining the action of the gastric and pancreatic juices and the bile.
10. Explain the effects of alcoholics and narcotics upon the organs and process of digestion; and give the "Law of Heredity."

THEORY AND PRACTICE.

(From Hughes' Mistakes in Teaching.)

[First, Second or Third Grade Certificate.]

1. Discuss the following mistakes: (1) Regarding knowledge as more important than the child; (2) of confining education to the school; (3) of neglecting definite moral training. Chap. I.
2. Give a brief of the arguments on the following questions of school management: (1) Yard supervision; (2) demerit marks; (3) tardiness in the teacher; (4) personal habits of the teacher; (5) sitting while teaching. Chap. II.
3. Give in substance the discussion on five mistakes of the teacher in dealing with parents. Chap. II.
4. Discuss the following mistakes in discipline: (1) Trying to teach without order. (2) State five rules given for "maintaining order." Chap. III.
5. What is said in relation to the following: (1) Too many rules. (2) Losing sight of the class; (3) Whipping for disciplinary purposes merely. (4) Allowing whispering on the plea of "allowing pupils to assist each other." (5) A hearty laugh in the schoolroom. Chap. III.
6. Discuss the following mistakes in method: (1) Asking questions in rotation; (2) repeating questions; (3) slavish use of text-books; (4) assigning lessons without testing thereon; (5) continuing lessons too long. Chap. IV.

7. State in brief the argument of Mr. Hughes on the following: (1) Thinking one teaching of a subject sufficient; (2) Supposing detecting errors means correcting them. Chap. IV.

8. What is said of the following: (1) Trying to teach too much in a single lesson; (2) paying most attention to smart pupils; (3) accepting partial answers; (4) repeating answers? Chap. IV.

9. (1) Write what is said of talking too much while teaching. (2) Quote the "teacher's golden rule," and the sayings of Mr. Hughes, Sir William Hamilton, and Horace Mann, relative to the same principle. Chap. IV.

10. Reproduce the substance of the arguments in discussing the following mistakes: (1) Allowing "Yes" and "No," and neglecting the manners and deportment of pupils; (2) tempting pupils by the self-reporting system.

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. (1) What State took the first step leading to the formation of the present Constitution of the United States? (2) Name the time and place fixed by the commissioners for the meeting of the first convention. (3) Why did the attempt fail? (4) When and where did the convention finally meet? (5) State why organization was delayed, who was elected president, and the length of the session.

2. (1) The ratification of how many States was necessary to adopt the Constitution? (2) How many ratified within a year? (3) When was the first election held under it? (4) What prevented Congress from organizing and the President from being inaugurated at the date fixed, March 4th, 1789? (5) When and where was he finally inaugurated?

3. (1) Give the six reasons set forth in the preamble for the establishment of the Constitution. (2) How many articles in the original instrument? (3) How many since added by amendment? (4) How many amendments were proposed by the first Congress? (5) Which three were offered and declared ratified to free and to adjust the negro to citizenship?

4. (1) Name the branches of government established by the Constitution. (2) Show wherein these branches are not entirely independent of each other. (3) Name the two bodies created constituting the first branch of government. (4) What are both together called? (5) How often is this body required to meet?

5. (1) Why is the House of Representatives so called? (2) State three conditions of eligibility therein. (3) Give the number of members in the first Congress. (4) When was the first census taken? (5) What was approximately

the population of the United States, and what was the primary object of this census?

6. (1) Give approximately the population of the Eleventh census; the number of members in the present House. (2) What population was made the basis of the apportionment of Representatives after the First census? what after the Eleventh? (3) Can a non-resident of a Congressional district be elected and serve it in Congress? (4) What three exclusive powers are granted the House of Representatives? (5) How many times has the House of Representatives elected a President, and under what circumstances may a State have no voice in such election?

7. (1) How many members now compose the United States Senate? (2) Who are eligible; how are they elected, and how did it happen that the Constitution did not require their election by popular vote? (3) Who is its presiding officer; when must the Chief Justice preside? (4) What executive and what judicial functions performed by this body? (5) Under what circumstances may a State lose its vote in the election of a Vice-President?

8. (1) Why is it that State Legislatures frequently instruct their Senators and request their Representatives to support certain national measures? (2) How long must a foreigner live in this country before eligible to the Senate? (3) What is the salary of a Senator; a Representative? (4) What are the salaries of Vice-President and Speaker of the House? (5) Under what conditions may a Governor appoint a Senator?

9. Give three processes by which a bill may become a national law.

10. (1) Show the points of agreement, and how State governments are all built on the plan of the general government. (2) Mention the executive officers of a State, and the primary duties of each.

ALGEBRA.

[First Grade Certificate.]

1. (1) Define algebra. (2) Express the multiplication of a , b , and c , in three ways. (3) Express the division of a by b in two ways. (4) Write x with a numerical coefficient; with a literal coefficient; with a literal exponent. (5) Express the fourth root of x^3 ; the reciprocal of $a+b$.

2. Express by algebraic symbols: (1) x equals the sum of a and b ; (2) x is less than the sum of a and b ; (3) x is greater than the sum of a and b ; (4) x is not equal to y ; (5) x is not greater than y ; (6) x is not less than y ; (7) make the sign of deduction (meaning therefore), the sign of continuation (meaning and so on); (8) name the four signs of aggregation; (9) in the trinomial $2a^2 - b^3 + 3c$, tell the sign

of $2a^2$, the coefficient of b^3 , and the exponent of $3c$; (10) give three rules embodying your answers to sub-question "9."

3. (1) Add: (a), $2a + (+a)$; (b), $2a + (-a)$; (c), $-2a + (+a)$; (d), $-2a + (-a)$.

(2) Subtract: (a), $2a - (+a)$; (b), $2a - (-a)$; (c), $-2a - (+a)$; (d), $-2a - (-a)$.

(3) Multiply: (a), $a \times (+b)$; (b), $-a \times (+b)$; (c), $a \times (-b)$; (d), $-a \times (-b)$.

(4) Divide: (a), $ab \div (+a)$; (b), $-ab \div (-a)$; (c), $-ab \div (+a)$; (d), $ab \div (-a)$.

(5) Explain all the algebraic meanings of the signs plus and minus.

4. Resolve each of the following into four factors: (1) $1 - m^6$; (2) $x^4 + 7x^3 + 9x^2 - 7x - 10$.

5. Find each the G. C. D. and the L. C. M. of $6x^2 - 13x + 6$, $2x^2 + 5x - 12$, and $6x^2 - x - 12$.

6. Reduce to its simplest form:

$$\left\{ \frac{m}{m-n} - \frac{n}{m-n} \right\} \div \left\{ \frac{m}{m+n} + \frac{n}{m-n} \right\}$$

7. Solve the equations $\frac{14}{x} + \frac{7}{y} = 4\frac{1}{3}$, $\frac{21}{x} - \frac{6}{y} = 1$.

8. A and B together earn \$50 in 8 days; A and C together, \$69 in 12 days; B and C together, \$55 in 10 days. How much can each earn in a day?

9. Find the value of x in:

$$\frac{1}{x + \sqrt{2-x^2}} + \frac{1}{x - \sqrt{2-x^2}} = \frac{x}{2}$$

10. A certain number of sheep were bought for \$468; but, after 8 of them had been reserved, the rest were sold at an advance of \$1 a head, and \$12 were gained on the lot. How many sheep were bought?

PHYSICAL GEOGRAPHY.

[First Grade Certificate.]

1. (1) Distinguish between Mathematical, Political, and Physical Geography. (2) Name six other sciences closely akin to and partly treated in Physical Geography.

2. Give the following in regard to the earth: (1) Its form; (2) its polar and mean equatorial diameters; (3) its surface in square miles, and volume in cubic miles; (4) its relative cubical contents and mass as compared with the sun; (5) the source from which its losing heat is largely restored.

3. Define: (1) Agonic line; (2) isogonic lines; (3) isoclinical lines; (4) magnetic storms; (5) Mercator's Projection.

4. (1) What is relief? (2) Give the total relief of the earth in miles, and the proportion between that and the earth's radius. (3) Tell the effects of erosion. (4) Under what circumstances might there be no land? (5) Classify islands.

5. (1) Describe the coral polyp, and coral reef building. (2) Give the theory of atolls.

6. (1) Define seismology. (2) Give the modern theory of earthquakes, and their effects at sea.

7. (1) Explain the nature of waves, how produced, movement, extreme height and velocity, duration, depth of disturbance, etc. (2) Explain the phenomena of tides; solar, lunar, spring and neap tides; height at different places; bores and the maelstrom.

8. (1) Define climate, and state the chief conditions which determine the climate of a place. (2) Tell how winds are produced; give the starting place of cyclones, and draw the distinction between cyclones and tornadoes.

9. (1) Define vapor, and tell how water is held in the air. (2) Explain what is meant by the "dew point," and state the conditions and in what forms vapor is precipitated.

10. (1) Tell what is meant by the flora of a country, and tell the conditions which effect flora. (2) Explain what is meant by the fauna of a country, and name some of the animals common to the several faunal regions.

SEPTEMBER, 1898.

ORTHOGRAPHY.

{ First, Second or Third Grade Certificate. }

1. (1) Define a word. (2) Give four classifications of words according to the number of syllables. (3) Define accent. (4) What is a trigraph? (5) Which is the antepenult?

2. Separate the prefix and the root in each of the following, and write after each prefix its meaning: Abed, afternoon, belittle, midsummer, misname, withstand, unkind, outstrip, disobey, foresight.

3. Give one word accented on each of the following syllables: (1) Ultimate; (2) penultimate; (3) antepenultimate; (4) preantepenultimate.

4. Give five pairs of each: (1) Homonyms; (2) synonyms.

5. Join to root words affixes meaning: Little, state, many, one who, wrong, back, continuing, to make, above, beyond.

6. Form a derivative by using each of the following : s a prefix or suffix, and define each word formed: Ship, dis, ess, post, hood, able, hyper, ty, ism, circum.

7. (1) Give the three principal rules for spelling, and illustrate each by an example. (2) Give an exception to each rule.

8. Syllabicate and mark diacritically the vowel in the accented syllable in each of the following words: Almond, opponent, despicable, combatant, juvenile, obligatory, interloper, protocol, onerous, patron.

9-10. Spell correctly the following words: Kar-i-kar-tur, vas-i-lage, suc-u-lent, in-ter-stis, re-sus-i-tate, sin-o-shur, sar-jent, tyr-a-nize, priv-i-lej, sin-til-late.

READING.

[First, Second or Third Grade Certificate.]

1. (1) Name the chief end to be attained in teaching Reading. (2) What close relation exists between the ability to read well and other lines of study?

2. (1) Discuss the statement: "Reading is an act of the mind and not an act of the lips only." (2) When may children begin to get thought from reading?

3. State your plans: (1) For improving the poor readers among the older pupils; (2) for preventing "sing-song" in reading poetry.

4. (1) Of what importance is "reading aloud"? (2) Express your views on the plan of having pupils to "stand and read," as soon as the class is called, without the teacher's attempting the "construction of a picture" in the minds of the class before their reading of the lesson.

5. (1) Distinguish between the "word method" and the "sentence method." (2) What method, in your judgment, is best adapted to render the child most self-helping?

6. (1) Which comes first, "the getting of the thought" or "the expression of it." What do you think of the statement, "The expression of the thought is a secondary matter; if the thought is fully comprehended, the oral expression of it is comparatively easy"? (2) Does the habit of quickly pronouncing all difficult words for the pupils, because it takes less time, save time in the end; and does such teaching produce self-helping and fluent readers?

7-8. Read for the examiner a paragraph of prose.

9-10. Read for the examiner, he selecting the piece, one or more stanzas of poetry.

UNITED STATES HISTORY.

[Second or Third Grade Certificate.]

1. (1) Name five nations that claim to have discovered North America. (2) Which do you think deserves the credit?

2. (1) Name the thirteen original colonies. (2) Connect each colony with the religious sect that was prominent in its settlement.

3. (1) Tell what you know of the following: (1) Bacon's Rebellion; (2) introduction of slaves; (3) invention of the cotton gin; (4) Monroe doctrine; (5) Carpet-baggers.

4. Describe the following battles: (1) Yorktown; (2) Gettysburg.

5. Tell what you know of the following: Bluelaws; Minute-men; Loco-focos; Henry letters; Abolitionists.

6. (1) Discuss the expulsion of the Acadians. (2) What poem has been written upon this subject, and by whom?

7. Enumerate the causes and events that led to the war of 1812.

8. Discuss Andrew Jackson in the following particulars: (1) His personal character; (2) military achievements; (3) relations to national banks; (4) his political opponents; (5) nullification.

9. Name in order the Presidents of the United States since Abraham Lincoln.

10. Who is each of the following, and for what noted; Cervera; Blanco; Hobson; Shafter; Schley?

UNITED STATES HISTORY.

[First Grade Certificate.]

1. What part of North America did Spain, France, England and Holland each claim, and upon what discoveries was each claim based?

2. Discuss briefly each of the following: (1) Union of 1643; (2) House of Burgesses; (3) Constitutional Convention; (4) Court of Alabama Claims; (5) Electoral Commission.

3. Tell why each of the following is noted: Miles Standish, Oglethorpe, Oliver Hazard Perry, John Jay, Genet, George Stephenson, Ralph Waldo Emerson, Fremont, Horace Mann, Cambon.

4. Tell what you know of the following: X. Y. Z. Dispatches; Charter Oak; Ashburton Treaty; Trent Affair; Squatter Sovereignty.

5. Discuss briefly the origin, leaders and doctrines of the following political parties: Federalist; Whig; Republican; Democratic; Populist.

6. From whom, how, and when did the United States obtain the following territory: Louisiana, Florida, Alaska, Hawaii, Puerto Rico?

7. Give some of the principal events in the administrations of the following Presidents: Thomas Jefferson, James Madison, Andrew Jackson, James K. Polk, Grover Cleveland.

8. Mention one literary production of each of the following: Irving, Longfellow, William Cullen Bryant, Bancroft, Edwin L. Green.

9. When did each of the following battles occur, and what was the result of each: Yorktown, New Orleans; Buena Vista, Gettysburg, Manila?

10. Give the expressed and real causes of the recent war. What do you know of Cervera? Aguinaldo? President Dole? Garcia?

ARITHMETIC.

[Second or Third Grade Certificate.]

1. The minuend is 296; the subtrahend exceeds the remainder by 132. Find the subtrahend and remainder.

2. Express in Roman notation the result of $2.8 \times .25 \div (.035 \div 5) + 2150 \times .06$.

3. The sum of two numbers is $5\frac{3\frac{1}{2}}{7\frac{1}{3}}$; one of them is the difference between $\frac{49\frac{3}{10}}{11}$ and $\frac{22\frac{1}{5}}{9}$. Find the other number.

4. Find the quotient of the L. C. M. of 315, 1350, and 1500, divided by their G. C. D.

5. Find, by using the approximate rule, the length of a bin, whose width and depth are each 5 feet, to hold 180 bushels of grain.

6. New York is 74° west longitude, and Paris $2^\circ 30'$ east longitude. If a telegram is sent from New York at 5 o'clock p. m., to Paris, at what time will it arrive, allowing 15 minutes loss in transit?

7. Sold two houses for \$1,000 each, lost 10% on one and gained 10% on the other. What was the gain or loss per cent. on the transaction?

8. If 12 men can build a wall 30 ft. long, 6 ft. high, 3 ft. thick in fifteen days, by working 12 hours per day, in what time will 60 men build a wall 300 ft. long, 8 ft. high, and 6 ft. thick, working only 8 hours per day?

9. In a partnership, A puts in \$1200 for 8 months; B \$900 for 10 months; C \$850 for 12 months. They gain \$1296. Find each partner's share of the gain.

10. What would it cost in U. S. money to plaster the twelve columns of the Florida State Capitol, at a franc per sq. yd., each column being 30 ft. high and $3\frac{1}{2}$ ft. in diameter.

ARITHMETIC.

[First Grade Certificate.]

1. $(\overline{2\frac{3}{4} + 2\frac{1}{2}} \times \overline{7 \div 2\frac{5}{8}} - 1\frac{2}{3} \div 2\frac{1}{2}) \div \left\{ \frac{2\frac{1}{2}}{3\frac{1}{4}} \div \frac{8}{5\frac{2}{3}} \right\} = ?$
2. If $\frac{4}{5}$ of 8 acres of land cost \$53 $\frac{1}{3}$, what will four times .03 of an acre cost?
3. Divide $(124 \times 10 + .1 \text{ of } .01 + .001 \text{ of } 10)$ by twelve hundred forty and six thousand nine hundred eighty-five thousandths less $\frac{1}{16}$.
4. (a) By selling a hat for 66 cents I lose 34%. What did the hat cost? (b) The interest of \$12,480 for 3 yr. and 1 mo. was \$384.80. What was the rate per cent?
5. If a globe of gold 3 $\frac{1}{2}$ inches in diameter be worth \$5,145, what will be the diameter of a globe worth \$120?
6. Bought a bill of exchange on Paris for 24 $\frac{1}{2}$ francs, at 5.20, 5% brokerage. What did it cost in U. S. money?
7. Bought a quantity of cloth for \$750, $\frac{1}{4}$ of which being injured I had to sell at \$1.25 a yard, and lost thereby \$100. What must I sell the remainder per yard to gain 51 $\frac{2}{3}$ % on the whole?
8. If a ten-cent loaf of bread weighs 7 $\frac{1}{2}$ ounces when wheat is worth \$1 $\frac{1}{10}$ a bushel, what ought a five-cent loaf to weigh when wheat is worth 82 $\frac{1}{2}$ cents a bushel?
9. If a ball be shot from a gun with a force that carries it one mile the first second, $\frac{4}{5}$ of a mile the next, and so on in the increasing ratio of $\frac{4}{5}$ till spent, what number of miles would the ball go?
10. What would be the exact cost of the silk necessary to make, and of the gas to inflate, a balloon 25 ft. in diameter, no loss allowed for seams, if the silk be worth \$1 $\frac{1}{7}$ a sq. yd. and the gas \$3 $\frac{25}{3927}$ a hundred cubic feet?

ENGLISH GRAMMAR.

[Second or Third Grade Certificate.]

1. (1) What is a sentence? (2) Name and illustrate the two essential parts of a sentence.
2. (1) Distinguish between a phrase and a clause. (2) Construct a sentence and underscore a phrase and a clause.
3. (1) Define all the parts of speech. (2) State which have inflection and what the inflection of each is called.
4. Decline: I, thou, you, ox, mother-in-law.
5. Arrange, in parallel columns, the masculines in one and the corresponding feminines in the other, the following words: Earl, Francis, czar, Jesse, monk, peacock, Paul, she-bear, tiger, widow.
6. (1) Make an outline of the adjective showing all the classes and sub-classes. (2) Name all the adjectives having singular and plural forms, and tell to which class each belongs.

7. (1) Distinguish between transitive and intransitive verbs. (2) Tell how the passive voice is always formed, and what class of verbs may have a passive voice.

8. (1) Write the synopsis of the verb *take* with *he* in the progressive form through the indicative mood. (2) The synopsis of the verb *see* with *thou* through all moods and tenses of the passive voice.

9. In the following quotation name: (1) The subject; (2) all the clauses; stating what each modifies and what kind of clause it is:

"Next to the illusion that money can confer happiness, is the illusion that the giving of money is the only form that practical helpfulness can take."

10. Parse in full these words from the above quotation: Next, illusion (first), that (first), confer, illusion (second), giving, only, that (last), practical, take.

ENGLISH GRAMMAR.

[First Grade Certificate.]

1. Give an example of each of four kinds of sentences: (1) When classified as to meaning; (2) When classified as to form.

2. Write in parallel columns the possessive, singular and plural of each of the following words: Thou, geese, it, deer, mice, negro, tyro, staff, son-in-law, Knight-templar.

3. Distinguish between the use of: My, thy, your, and mine, thine, yours.

4. (1) Define an appositive. (2) When one of two or more appositives is in the possessive form, what of the others? (3) Construct a sentence and illustrate the latter.

5. Distinguish between the uses of *shall* and *will*: (1) In declarative sentences; (2) in denoting determination; (3) in asking questions.

6. (1) Tell how imperfect (present), perfect and compound participles are formed. (2) Distinguish between verbal adjectives and verbal nouns in ing. (3) Give the verbal nouns formed from any verb, and illustrate that they are grammatical equivalents. (4) Name and write the five forms of the verb *rise*, the four of the verb *talk*, and explain which verbs have five forms and which four. (5) What is an attributive verb? Use one in a sentence and change it into its equivalent copulative verb and attribute.

7. (1) Give the synopsis with *thou* of the verb *take* in the progressive form of the indicative mood. (2) The synopsis with *he* of the verb *see* through all moods and tenses of the passive voice.

8. (1) Illustrate seven uses of the infinitive phrase, five when a noun, one when an adjective, one when an adverb.

(2) Construct sentences and illustrate five uses of noun clauses.

9. In the following quotation write: (1) All the main propositions; (2) all the subordinate clauses; tell what kind each is, and what it modifies; (3) all the phrases, tell what each modifies and its kind:

"I see, in the world, two heaps—one of human happiness, and one of misery; now, if I can take but the smallest bit from the second heap and add it to the first, I carry a point. If, as I go home, a child has dropped a half penny, and, by giving it another, I can wipe away its tears, I feel that I have done something."

10. Parse in full the following words in the above quotation: Heaps, one, now, but, first, as, add, home, giving, its.

GEOGRAPHY.

[First, Second or Third Grade Certificate.]

1. (a) Name all the zones and give the boundaries of each. (b) Give the width of each in common miles.

2. State the name of the line which marks the highest northern limit on which the rays of the sun are ever vertical, and give the date on which the sun reaches this limit.

3. (a) Name the countries of South America. (b) Name their capitals. (c) Tell what form of government each is.

4. Starting from Pittsburg, Pa., and traveling entirely by water, on what waters would you sail in order to reach St. Petersburg, Russia.

5. Name five of the chief industries of the following sections of the United States: New England States; South Atlantic States; North Central States; Rocky Mountain States; Gulf States.

6. (a) Show the relation between the physical and political condition of a country. (b) Show how the physical features determine the industries, commerce and routes of trade.

7. (a) What is the nearest distance in statute miles between two places on the equator situated respectively in longitude 137° E, and longitude 175° W? (b) When it is Thursday noon at the former, what is the day and hour at the latter?

8. Name the provinces of Canada and the chief industries of each.

9. Draw an outline map of Florida, locating six of its largest cities, and three of its largest rivers.

10. Draw a township, number its sections, sub-divide its 20th section into quarter-quarters, and its SE $\frac{1}{4}$ of the

NE $\frac{1}{4}$ into quarter-quarter-quarters, and make a cross in the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of NE $\frac{1}{4}$.

COMPOSITION.

[First, Second or Third Grade Certificate.]

1. (1) State the purpose of composition work; (2) its relations to the other studies in the language group.

2. (1) In preparing a school program, how much time should be allowed for composition? (2) Discuss the value of a little daily practice in composition as compared with longer and less frequent practice.

3. (1) Give a remedy for the common error of requiring pupils to express their thoughts when they have none to express. (2) What must always precede expression and good, clear writing?

4. (1) State the sources from which pupils must get their materials for composition. (2) Show how a teacher may assist the different grades to correct use of language and to facile expression of thought.

5. (1) Define redundancy and tautology; correct and tell which exists in each of the following: (a) "Every man on the face of the earth has duties to perform." (b) "The effects and consequences of such corruption and degeneracy are deplorable and lamentable." (2) Illustrate how a quotation within a quotation should be written. (3) Name the figures of speech in each of the following: (a) "The waves to sleep had gone." (b) "She has seen sixteen summers." (c) "Fame is a plant that grows on soil immortal." (d) "Life is like an isthmus between two eternities." (e) "The coat was a mile too large for him." (4) State the three essentials of good diction. (5) Discuss the necessity of paragraphing.

6. Why is an outline important?

7-10. Prepare an outline and write a composition, at least one foolscap page in length, on one of the following subjects:

- (1) Language Work in the Common School Course.
- (2) My First Teachers' Institute.
- (3) Modern Implements of War.
- (4) State Uniformity of Text-Books.
- (5) Physical Education.

PHYSIOLOGY.

[First, Second or Third Grade Certificate.]

1. Name: (1) The systems of the body; (2) the tissues.

2. Name all the bones of the head.

3. (1) Into what three kinds may all foods be classified? (2) Name three examples of each kind.

4. (4) Name the juices used in digestion. (2) Tell where each is secreted, and its effect on food.

5. Describe the process of inspiration and expiration.

6. Name the parts of a tooth and the substances of which it is composed.

7. Describe each of the following processes: Transfusion; trepanning; grafting; peristalsis.

8. (1) What composes the nervous system? (2) What are motory, sensory, vaso-motor, sympathetic and cranial nerves?

9. Locate and define the following: Lacunae; fasciæ; cochlea; meninges; massefer.

10. Describe in full the organs of speech.

THEORY AND PRACTICE

(From Browning's Educational Theories.)

[First, Second or Third Grade Certificate.]

1. In what two ways may the history of Educational Theories be of practical use to teachers? Preface.

2. (1) Name the subjects taught by the Greeks, and state their reasons for attaching great importance to athletics and music. (2) Discuss briefly Plato's plan, and show wherein Aristotle differs from him and is more practical. Chap. I.

3. (1) Distinguish between the Greek and Roman ideals. (2) Name the first Roman writer on education. (3) State briefly Cicero's theory, and give the culminating idea with him of all education. (4) Give Quintilian's reasons for favoring public schools, and his ideas as to corporal punishment, the qualifications and duties of teachers. Chap. II.

4. (1) State the changes produced by the introduction of Christian education under the Fathers; give the design of Charles the Great; distinguish between trivium and quadrivium in the schools of the monasteries and the castles; discuss the discipline in the schools of the period. (2) Tell who first conceived the idea of a really universal education; and write of John Sturm, his system of education, and its influence. Chap. III.

5. Write a sketch of the life, the ideas, the rules of education, the practical suggestions, the class methods, the kinds of schools, and the wonderful reforms of Comenius. Chap. IV.

6. (1) Name the second great vindicator of naturalistic education. (2) Give some of the precepts of his essays; his object of education; his description of what the teacher should be; his four recommendations. Chap. V.

7. Give an outline of Rousseau's "Emile," and tell its effects upon the educational systems of the times. (2) Name the companion work by the same author, and give some of the ideas advanced therein relative to the education of women. Chap. IX.

8. (1) Who wrote "Leonard and Gertrude"? (2) Write a brief sketch illustrating the principles, methods, means of instruction, and influence of its author. Chap. X.

9. Tell who Fichte and Herbart were, and write briefly of the work, the theories, and the influence of each upon education. Chap. XI.

10. Write of the American Common School: Original conception; the effect of Pestalozzi's theories; the influence of Fröbel's teaching; the work of Horace Mann; the schools of today. Chap. XIV.

CIVIL GOVERNMENT.

[First Grade Certificate.]

1. (1) Name the three departments of government. (2) Give an outline of the scope of each. (3) Show how each acts as a check upon the others.

2. What is a bill of rights, and name the rights guaranteed by the Constitution.

3. Enumerate ten powers delegated by the Constitution to Congress.

4. Define the following: Local option; lobbying; high seas; ex post facto law; letters of marque and reprisal.

5. (1) State the Constitutional provisions for the election of a President. (2) Show wherein the present method differs from that originally prescribed.

6. (1) Name the members of President McKinley's Cabinet and the office held by each. (2) What departments only were represented in Washington's Cabinet?

7. Mention five points in which the Articles of Confederation differed from the Constitution.

8. State the difference between the following: Excises and duties; direct and indirect taxes; Joint and Executive sessions; reprieves and pardons.

9. (1) Who are citizens of the United States? (2) Who is an alien, and how may aliens become naturalized?

10. (1) Who constitute State Board of Education? (2) State the sources of the State, County and Sub-District school funds. (3) Who only has the authority to appoint and contract with teachers? (4) Name five chief duties of a County School Board. (5) Name five principal duties each of a County Superintendent and of a teacher.

ALGEBRA.

(From White's School Algebra.)

[First Grade Certificate.]

1. Write and illustrate the meaning of each of the following: Factors; algebraic equation; literal co-efficient; numerical exponent; reciprocal of a quantity; radical sign and index; sign of inequality; sign of deduction; sign of continuation; signs of aggregation (five).

2. (1) Define an algebraic term. (2) Explain the signs $+$ and $-$, and $\times$ and $\div$, in relation to terms. (3) How many terms in $a^2b \times 4 \div 2a$? (4) Write one of each; Monomial, binomial, trinomial, polynomial. (5) Define and illustrate similar terms.

3. Let $a=5$, $b=2$, $c=3$, and $d=1$, and then find the numerical value of $(a+2b+c)(a^2-2abd) \div \sqrt{3b^2c-(a^2+b)}$.

4. Divide $\frac{1}{4}x^3 + \frac{1}{7}xy^2 + \frac{1}{12}y^3$ by $\frac{1}{2}x^2 - \frac{1}{3}xy + \frac{1}{4}y^2$.

5. Resolve each of the following into four factors: (1), $x^8 - y^8$; (2), $m^6 - n^6$; (3), $a^4 - 10a^2 + 9$; (4), $81x^4 - 72x^2y^2 + 16y^4$; (5), $x^4 - 2x^3 - 16x^2 + 2x + 15$.

6. Reduce to its simplest form:

$$\left\{ 1 + \frac{a-b}{a+b} \right\} \div \left\{ 1 - \frac{a-b}{a+b} \right\}.$$

7. Seven years ago A's age was just three times that of B, but seven years hence A's age will be just double that of B. What is the age of each?

8. Find the value of x in $2\sqrt{x-1} - \sqrt{4x-11} = 1$.

9. Find the values of x and y : $x^2 + xy + y^2 = 175$, $x^3 - y^3 = 875$.

10. A man began saving by putting by 1 cent on New Year's Day, 2 cents on the next day, 3 cents on the next, and so on. In how many days would he have put by \$98.70?

PHYSICAL GEOGRAPHY.

(From Houston's New Physical Geography.)

[First Grade Certificate.]

1. Of what does physical geography treat?

2. (1) Enumerate five proofs of the rotundity of the earth. (2) Give the causes of the change of seasons.

3. (1) Give proofs that the interior of the earth is still in a highly heated condition. (2) State the causes of volcanoes and earthquakes.

4. Describe the changes, and state the six agencies now causing changes in the earth's crust.

5. (1) What are geysers? Explain the cause of their eruption, and name the three largest geyser regions of the world. (2) How does the destruction of the forests increase the severity of inundations?

6. (1) Distinguish between ebb, flood, spring, and neap tides. (2) Where does the parent tidal wave originate?

7. Define climate, and enumerate the circumstances which influence the climate of a country.

8. (1) Explain the origin of winds. (2) Describe some of the peculiarities of cyclones.

9. (1) Define flora, and give the characteristic features of the flora of each of the horizontal zones of vegetation. (2) Define fauna, and state upon what the existence of animal life is dependent.

10. Locate the United States: (1) As to mathematical zone; (2) physical zone. (3) Between what two isothermal lines? (4) Give the causes of difference in the climate of the Eastern and Western coasts. (5) State in what wind zone the United States is situated.

JUNE, 1899.

ORTHOGRAPHY.

(From Reed's Word Lessons.)

[First, Second or Third Grade Certificate.]

1. Unite the following words and suffixes, define the words formed, and give the rule of spelling that applies to each: Censure—able, hate—ful, glad—den, conceal—ed, benefit—ed, acquit—ed, occur—ed, pity—able, copy—ist, charge—able.

2. Syllabicate and mark diacritically the vowel in the accented syllable in each of the following: Incisive, dolorous, molecule, apparatus, exquisite, stereotype, interstice, inventory, data, abdomen.

3. Mark diacritically the principal vowel in each of the following: Dance, gape, forge, squad, alder, tongue, feud, rude, wolf, seive.

4. Unite each of the following prefixes to a word, and define so as to show the meaning of the prefix: Con, ex, re, sub, in, dis, ad, ab, trans, pre.

5. Separate the affix from the root-word, and define each affix: Controversy, kingdom, semi-annual, belittle, citizenship, animalcule, transmit, apiary, affix, parentage.

6. Form and define ten words, using an affix meaning each of the following: Twice, against, made of, fold, manner, one who, without, full of, before, many.

7. Write and define two homonyms for each of the following: Cent, pear, air, rain, meat, you, idol, fain, isle, raise.

8. Write the following, and, after each, one or more synonyms: Capacity, rivalry, talkative, famous, bring, forsake, judgment, final, poverty, character.

9-10. Write correctly the following words, spelled phonetically: Ak-we-dukt, ko-ko, vit-lz, kur-te-se, a-mund (a nut), lang-guor, sam-un, ger-kin, sham-my, ek-we-te, concensus, raz-ber-e, rez-er-vwor, kub-berd, bel-lus, for-hed, skol-lup, skane, kops, di-a-fram.

READING.

[First, Second or Third Grade Certificate.]

1. Define: Pitch, tone, volume, cadence, accent.
2. Name the different methods of teaching reading. State your preference and your reasons for it.
3. Name the essential qualifications of a good teacher of reading.
4. Illustrate your way of teaching other subjects in connection with reading. If you have never taught, tell how you think it should be done.
- 5-7. Read orally a paragraph or phrase selected by the examiner.
- 8-10. Read an extract of poetry selected by the examiner.

UNITED STATES HISTORY.

(From Fields' U. S. Grammar School History and Green's Florida History.)

[Second or Third Grade Certificate.]

1. Outline briefly your plan of teaching history.
2. Relate the circumstances under which the Pacific was first seen.
3. Write about the witchcraft delusion.
4. Give the circumstances which brought it about, and write, somewhat in detail, of the greatest achievement in Jefferson's administration.
5. Give the history of the steamboat, from its invention to the present time.
6. Describe the battle that saved Florida from invasion in 1864.
7. Relate the history of the development and advancement of public education in the United States.
8. Give an account of Dr. Turnbull and his colony.
9. Tell of the "Republic of Florida," and narrate the story of the Prophet Francis and his daughter Malee.
10. (a) What was Alabama's wish in regard to West Florida? (b) Recite briefly the history of events under both the first provisional and the first territorial governors, and who were they?

UNITED STATES HISTORY.

(From Field's U. S. Grammar School History and Green's Florida History.)

[First Grade Certificate.]

1. What benefits should pupils receive through the study of history?
2. Recite the difficulties which arose in the Constitutional Convention, and the compromises by which they were settled.
3. Tell who inaugurated it, and explain what is meant by the "spoils system."
4. Trace briefly the history of the territorial acquisitions of the United States.
5. Give a statement of the comparative strength and resources of the North and of the South for carrying on the Civil War; the losses on both sides and the debt incurred.
6. Write a brief sketch showing the development of the United States in literature and art, and through inventions.
7. Write briefly of the founding of St. Augustine, the destruction of Ft. Caroline and the subsequent slaughter.
8. Give a brief outline of the history of Florida under British rule to the second Spanish occupation.
9. Tell the circumstances of the purchase, of the ratification of the treaty, and of the transfer of the Floridas to the United States.
10. Detail briefly the happenings of the Seminole War after General Zachary Taylor took command.

ARITHMETIC.

(From Milne's Standard Arithmetic.)

[Second or Third Grade Certificate.]

1. Find the four prime factors of 4862.
2. Five-eighths of A's money increased by the differences between $\frac{3}{4}$ and $\frac{3}{4}$ of his money equals \$1020. How much money has A?
3. Express by Roman notation the quotient of 12×12 hundred-thousandths divided by 12-millionths.
4. From .9 mi. take 120 rds. 4 yds. 2 ft.
5. The circumference of a circular field is 436 rds. How many acres does it contain?
6. A deposited 85% of his money in a bank, and, after drawing out 20% of the sum deposited, he had \$3859 in the bank. What was the amount of his money?
7. What principal will produce \$17.78 interest from January 10, 1892, to March 13, 1892. at 6%?
8. If 54 men, in 28 days of 10 hours each, dig a trench 352 yards long, $2\frac{1}{2}$ yards broad, and $1\frac{1}{2}$ yards deep, how long

a trench $2\frac{3}{4}$ yards broad and $1\frac{3}{4}$ yards deep, will 112 men dig in 25 days of $8\frac{1}{4}$ hours each?

9. What must be the depth, in feet and inches, of a cubical bin that will contain exactly 1200 bushels?

10. What is the weight of a marble pyramid whose base is 4 feet square and whose altitude is 8 feet, if a cubic foot of marble weighs 171 pounds?

ARITHMETIC.

(From Milne's Standard Arithmetic.)

[First Grade Certificate.]

1. A pole 63 feet long was broken into two unequal pieces, and $\frac{2}{3}$ of the longer piece equaled $\frac{3}{4}$ of the shorter. What was the length of each piece?

2. If a grocer's scales give only $15\frac{3}{4}$ oz. for a pound, of how much money does he defraud his customers in the sale of 5 bbl. of sugar, each weighing 2 cwt. 10 lb. 12 oz., true weight, at 5 cents a pound?

3. What is the diameter of a water wheel if an arc of 18° of its circumference is 1 ft. 9 in. in length?

4. Find a single discount equivalent to two successive discounts of $12\frac{1}{2}\%$ and 8% on a bill of \$360.

5. The proceeds of a note for 1 mo. 18 da. when discounted at a bank at 5% were \$1869.35. What was its face?

6. Find the face of a draft on New York, at 60 days' sight, bought for \$650. exchange being at $1\frac{1}{4}\%$ premium, and money being worth 6% .

7. If a box five feet long will hold 100.44 bushels, how much will a similar box 10 feet long hold?

8. There is a circular park 250 rods in diameter, and within it is a circular lake 125 rods in circumference. What is the area of the park exclusive of the lake?

9. If in selling cloth $\frac{3}{4}$ of the gain is equal to $\frac{3}{16}$ of the selling price, for how much will $3\frac{1}{3}$ yards sell that cost \$5 per yard?

10. A tree was 3 feet in diameter at the butt, and its diameter at a height of 40 feet was 1 foot. What were the cubical contents of that portion of the tree?

ENGLISH GRAMMAR.

(From Metcalf's English Grammar.)

[Second or Third Grade Certificate.]

1. Construct a complex sentence containing an adjective phrase and an adverbial phrase, and underscore each.

2. Make complete analysis of the following sentence: "He that hath pity upon the poor lendeth unto the Lord, and that which he hath given will he pay him again."

3. In the following (1) tell the kind of sentence, and why; (2) write each clause and phrase, its kind, and what

it modifies: "We cannot perceive that the study of grammar makes even the smallest difference in the speech of people who have always lived in good society."

4. Define inflection, which parts of speech have inflection, and what is it called when applied to different ones?

5. Write each of the following words in a column, and write opposite in four other columns, the plural of each, the feminine (if any), the possessive singular, the possessive plural (if any): Boy, man, box, money, he-bear, ox, lord, actor, t, executor.

6. (1) I will remember that. (2) I will remember that which you say. (3) I will remember what you say. (a) Parse *that* in full in (1) and (2). (b) Explain the objects of the transitive verbs *remember* and *say* in both (2) and (3).

7. Write the synopsis of the verb *choose* with *he* in all moods and tenses of the passive voice.

8. Explain and illustrate the formation of the progressive and passive forms of verbs.

9. Write short sentences and illustrate each of the following uses of the infinitive phrase: (1) Subject of a sentence; (2) object of a verb; (3) object of a preposition; (4) complement of a verb; (5) appositive; (6) adjective; (7) adverb.

10. Parse in full: "Than whom, Satan excepted, none higher sat."

ENGLISH GRAMMAR.

(From Metcalf's English Grammar.)

[First Grade Certificate.]

1. (a) Classify the following sentence; (b) make a list of the clauses, tell the kind, and what each modifies: "He gave *it* for his opinion, *that whoever* could make two ears of corn or two blades of grass to *grow* upon a spot of ground *where only one* grew before would deserve *better* of mankind, and *do* more service to his country, than the whole race of politicians *put together*."

2. Make a list of all the phrases in the above sentence, tell the kind, and what each modifies.

3. Parse in full the ten words in italics in the above sentence.

4. Write each of the following words in a column, and opposite in four other columns the plurals of each, the feminine (if any), the possessive singular, the possessive plural (if any): Boy, man, box, valley, lily, ox, lord, actor, t, executor.

5. Show in a tabulated form all the kinds of pronouns, and the subdivisions of each.

6. Construct sentences illustrating the use of noun clauses as a subject, an object of a preposition, a complement, an object of a verb, and an appositive.

7. Write the synopsis of the verb *choose* with *thou* in all the moods and tenses of the passive voice.

8. Write two sentences, one containing a restrictive clause, the other a non-restrictive clause. Explain the punctuation.

9. Write sentences illustrating the use of each of the following connectives: (1) Correlative conjunction; (2) subordinate conjunction; (3) conjunctive pronoun; (4) conjunctive adverb; (5) compound conjunctive adverb.

10. Illustrate that use determines the parts of speech of words.

GEOGRAPHY.

(From Redway's Geography.)

[First, Second or Third Grade Certificate.]

1. (a) Name six seas and a gulf on the east coast of Asia; (b) the peninsulas projecting from this coast; (c) the plateau occupying the peninsula of India, and tell of what it is composed.

2. Give seven principal occupations of man, and tell in which section of the United States each is most largely carried on.

3. As relates to Mexico tell: (1) In what zones located; (2) the number of states composing it; (3) of its climate and plant life; (4) in what consists its chief wealth.

4. Write the countries of South America, and opposite each its capital. Locate and describe its principal lake.

5. Compare North and South America as to: (1) General shape; (2) western highlands; (3) heights of peaks; (4) extent of plateaus; (5) the number and regularity of mountain ranges.

6. (a) A noted cape of the United States and the most southern point of the European mainland are in about the same latitude; name each. (b) Name and bound the two important republics of Europe.

7. (a) Name the most densely populated country of Europe. (b) Explain why the British isles are moister and milder than the eastern coast of America in the same latitude.

8. Describe the five great river systems of Africa.

9-10. Draw a map of Florida, placing the name of each county within its proper boundaries.

COMPOSITION.

(From Swinton's New School Composition.)

[First, Second or Third Grade Certificate.]

1. Define composition, sentence, paragraph, discourse, diction.

2. Construct six simple sentences with which illustrate "Synthesis of Compound Sentences."

3. Under the topic "Conversion and Combination of Sentences," illustrate expansion, contraction, combination.

4. (a) Give three requisites of good style. (b) Name some violations of each and explain what is meant by redundancy, tautology, and circumlocution.

5. (a) Define and illustrate four figures of speech. (b) Name three qualities to be aimed at in the construction of paragraphs.

6-10. Prepare a topical outline and write an essay of not less than 200 words on one of the following subjects:

- (a) The Necessity of Ripe Scholarship to the Teacher.
- (b) The Result of Giving Long Terms to Teachers' Certificates of Low Grade.
- (c) Politics in the Public Schools.
- (d) Female Suffrage.

PHYSIOLOGY.

(From Steele's Hygienic Physiology.)

[First, Second or Third Grade Certificate.]

1. Tell why we need food. Describe the three principal kinds of food, and state why one kind is insufficient.

2. Describe the four processes of digestion, naming the organs and the functions of the juices employed in each process.

3. Give the relative value and the length of time required for the digestion of some of the principal kinds of food.

4. State five evil results of rapid eating, and the diseases likely to grow out of it.

5. Tell the effects of alcohol upon digestion, and explain what is meant by "fatty degeneration."

6. Describe the structure and three principal organs of the nervous system.

7. Write a description of the organ of taste, and tell its uses.

8. Describe the organ of hearing, and tell how to care for it.

9. Write a description of the eye, and explain the causes of far-sightedness and near-sightedness.

10. Give five of the principal constituents of tobacco smoke, and describe the physiological effects of tobacco, especially upon the young.

THEORY AND PRACTICE.

[From Compayre's Psychology Applied to Education.]

[First, Second or Third Grade Certificate.]

1. Give the three different divisions of education, the different means of physical education, and the substance of what Horace Mann said on hygiene. Chap. I.

2. State the necessities of physical exercises, and tell which are best, and why. Chap. II.

3. Besides knowing well what he teaches, what two other things should the teacher know? Chap. III.

4. Reproduce what is said of teaching through the eyes, and of the educative value of drawing. Chap. IV.

5. Discuss methods of instruction; tell how they should vary and to whom be accommodated. Chap. VII.

6. Give the substance of what is said of the importance of the black-board and other school apparatus; also, of the office of books. Chap. VIII.

7. (a) What is said of the necessity of preparation by the teacher for the recitations? (b) Explain the Socratic method, and discuss its value and limitations. Chap. IX.

8. Discuss oral and written exercises, and the method of conducting each. Chap. X.

9. Give the substance of what is said about the correction of compositions. Chap. X.

10. (a) Discuss character and moral education, as compared with knowledge and intellectual education. (b) State the essentials of moral education. Chap. XI.

CIVIL GOVERNMENT.

(From Peterman's Elements of Civil Government.)

[First Grade Certificate.]

1. State several reasons why civil government should be taught in the public schools.

2. Name, in order, all grades of government, beginning with the family as the starting point.

3. Name all the officers usual in county governments, stating briefly the duties of each.

4. Name the officers of the State, and give briefly the duties of each.

5. (a) Discuss the three forms of civil government. (b) Give the reasons for your answer, and say whether the tendency in the United States is towards pure democracy or aristocracy.

6. Is it right to abstain from voting because of corruption in politics? Why?

7. (a) Express your views upon vote-buying and vote-selling. (b) State the penalty for bribery in ancient Athens, and your views as to the penalty.

8. Explain the necessary steps in making a State law.

9. Describe the Australian ballot.

10. Which do you like better for nominating State and county officers, primary elections or party conventions? Give reasons for your choice.

ALGEBRA.

(From White's School Algebra.)

[First Grade Certificate.]

1. Write the following formulas: (1) The square of the sum of two numbers; (2) the square of the difference of two numbers; (3) the product of the sum and difference of two numbers; (4) the divisibility of $a^n + b^n$; (5) the divisibility of $a^n - b^n$.

2. Resolve each into four prime factors: $x^8 - y^8$, $m^6 - n^6$, $x^6 - 64$, $x^4 - 2x^3 - 16x^2 + 2x + 15$, $x^4 + 7x^3 + 9x^2 - 7x - 10$.

3. Find the H. C. F. and the L. C. M. of $x^5 - 2x^3 - x^2$ and $x^3 + 2x^2 + 2x + 1$.

4. Simplify $\frac{x^2 + 20x + 96}{x^2 - 15x + 50} \times \frac{x^2 - 8x - 20}{x^2 + 10x - 24} - \frac{x^2 + 10x + 16}{x^2 - 7x + 10}$

5. Solve the equations $\frac{1}{x} + \frac{1}{y} = a$; $\frac{1}{x} - \frac{1}{y} = b$.

6. There are four numbers such that, by adding each to twice the sum of the remaining three, we have 46, 43, 41, and 38, respectively. What are the numbers?

7. Rationalize the divisor and simplify $\frac{2\sqrt{3} + 3\sqrt{2}}{3\sqrt{3} + 4\sqrt{2}}$

8. Form the quadratic equation whose roots are $2 - \sqrt{3}$ and $2 + \sqrt{3}$.

9. A man bought a certain amount of sugar for \$66; but if sugar were to rise one cent per pound, he would obtain fifty pounds less for the same money. How much sugar did he buy?

10. The sum of the diagonal and the longer side of a rectangle is three times the length of the shorter side, and the difference in the length of the two sides is four yards. What is the area of the rectangle?

PHYSICAL GEOGRAPHY.

(From Houston's New Physical Geography.)

[First Grade Certificate.]

1. Define physical geography.
2. Give five proofs of the rotundity of the earth.
3. (a) Give three reasons for the belief that the interior of the earth is in a highly heated condition; (b) three reasons for the theory of the original fluidity of the earth.
4. Discuss earthquakes: (1) Facts established; (2) varieties of motion; (3) velocity of motion; (4) their causes; (5) periodicity and distribution.
5. Give three proofs of the subsidence of ocean beds.
6. Give four noticeable peculiarities in the relief forms of continents.
7. Name five conditions which influence the quantity of water discharged by rivers.
8. State four causes for the irregular distribution of heat over the earth.
9. Name the conditions requisite for the existence of forests; of prairies; of steppes; of deserts.
10. Distinguish between ebb, flood, spring, and neap tides, and tell where the parent wave originates.

SEPTEMBER, 1899.

ORTHOGRAPHY.

(From Reed's Word Lessons.)

[First, Second or Third Grade Certificate.]

1. Unite the following words and suffixes, define the words formed, and give the rule of spelling that applies to each: Censure—able, hate—ful, glad—den, conceal—ed, benefit—ed, acquit—ed, occur—ed, pity—able, copy—ist, charge—able.
2. Syllabicate and mark diacritically the vowel in the accented syllable in each of the following: Abdomen, condolence, rapine, lowering, apparatus, hymenean, acclimate, inventory, finance, dictionary.
3. Give five nouns, underscoring the suffix in each, the suffixes meaning respectively: Act of, to make, one who, pertaining to, state of being.
4. Form a derivative by using each of the following as a prefix or suffix, and define each word formed: Age, ery, cule, dom, ful, ish, ity, ment, ness, post.
5. Write the following and opposite each a homonym: Rude, sear, surf, serge, auger, throw, team, suite, root, strait.

6. Write the following, and after each one or more synonyms: Capacity, rivalry, talkative, famous, bring, forsake, judgment, final, poverty, character.

7-10. Write correctly the following words, spelled phonetically: Ak-we-dukt, ko-ko, vit-lz, kur-te-se, am-und (a nut), lang-guor, sam-un, ger-kin, sham-my, ek-we-te, con-cen-sus, raz-ber-e, rez-er-vwor, kub-berd, bel-lus, for-hed, skol-lup, skane, kops, di-a-iram.

READING.

[First, Second or Third Grade Certificate.]

1. (a) Give the two-fold purpose which should guide the teacher in teaching reading. (b) Which is the immediate purpose; which the great ultimate purpose?

2. In teaching reading, what must invariably precede thought-getting, or reading proper?

3. (a) In word-study, what three things must a child learn about a word before he can be said to know it? (b) Name them in the order to be taught.

4. (a) If you teach primary reading by the word method, when should the study of phonics begin? (b) Give two purposes of phonic drills.

5. Reading is thought-getting and thought-giving; what is the unit of reading?

6. Why should the teacher from the first, teach the child that he must read by sentences?

7. (a) Upon what does expression in oral reading depend? (b) Explain the necessity of silent reading by sentences to precede the oral in primary reading.

8. Show the necessity of conversation lessons in connection with reading, taking for example,

“The curfew tolls the knell,” etc.

9. (a) Show the value in primary and lower grades, of the teacher's frequently reading or reciting the best things in literature; also the necessity of much supplementary reading by pupils. (b) In communities where parents are unwilling or unable to buy books, what can and should be done by the teacher?

10. Name the series, and give the author's plan of teaching beginners to read from the first reader of any series.

11. Read orally a paragraph of prose selected by the examiner.

12. Read an extract of poetry selected by the examiner.

UNITED STATES HISTORY.

(From Field's U. S. Grammar School History and Green's Florida History.)

[Second or Third Grade Certificate.]

1. (a) Name the wars, with their dates, in which our country has been involved from 1776 to 1899. (b) Give causes and results of each. (3) Give three principal battles in each. (d) Name two leading commanders in the opposing armies in each war.

2. Name the political parties of our country from Washington to McKinley, and give one doctrine of each party.

3. Name the territorial acquisitions of the U. S. in their order.

4. Name five important treaties and give the substance of each.

5. State facts to each of the following: Philip Livingstone, Horace Greeley, Wm. H. Seward, Marchand, Dreyfus, Kruger, Kitchener, Aguinaldo, Dewey, Torral.

6. Name five great inventions of the nineteenth century with their inventors.

7. Name the different countries to which Florida belonged in the proper order.

8. (a) Give the boundary lines of East and West Florida. (b) When and under what circumstances was Florida thus divided? (c) When and under what circumstances were the sections re-united?

9. Outline the Seminole War from beginning to end, giving the principal commanders, massacres, battles and treaties.

10. Name the Governors of Florida from the Civil war to the present, giving one event in each administration.

UNITED STATES HISTORY.

(From Field's U. S. Grammar School History and Green's Florida History.)

[First Grade Certificate.]

1. Where did Raleigh attempt to plant a colony? Give its history.

2. (a) When and by whom was Maryland settled? (b) What advantages did the Maryland charter confer? (c) Tell of the difficulties between the Catholics and the Protestants.

3. Give account of the surrender of Burgoyne. What were the immediate results?

4. Relate the circumstances which, at the time of the establishing of the Constitution, led to having two houses of Congress.

5. What caused the war with Mexico? Give the results.

6. Mention the principal engagements in the war with Spain, with the date of each. What treaty closed this war?

7. What was included in East Florida, and what in West Florida when they were separated under different governments.

8. (a) What change in the ownership of Florida took place at the close of the French and Indian War? (b) Why did Florida not take part in the Revolutionary War?

9. Who was "Old Rory"? Tell some story in connection with him.

10. Give the history of education in Florida.

ARITHMETIC.

(From Milne's Standard Arithmetic.)

[Second or Third Grade Certificate.]

1. $3\frac{5}{8} + 6\frac{8}{9} \times 2\frac{1}{4} - 1\frac{4}{5} \div 2\frac{4}{7} = ?$

2. B owned .35 of a factory and sold .4 of his share to C, after which five hundred thousandths of the factory was destroyed by fire, B's loss being \$1680. What was the value of the factory?

3. At $3\frac{1}{2}$ cents a foot board measure, what is the cost of five pieces of sawed timber, each measuring 18 feet long, 1 foot $\frac{1}{4}$ inches wide, and 11 inches thick?

4. How much cheaper will it be to pave a street $\frac{1}{4}$ of a mile long and 60 feet wide with asphalt at \$.22 a square foot, than to pave it with granite blocks at \$3.10 a square yard?

5. A dealer bought grain by measure and sold it by weight, thereby gaining $1\frac{1}{4}$ per cent. in the number of bushels. He sold at a price 5 per cent. above his buying price, and received \$4910.976 for the grain; find the cost.

6. A commission merchant whose rate both for selling and investing is 5 per cent., receives 24000 pounds of pork, worth 6 cents a pound, and \$3000 in cash, with instructions to invest the whole in cotton. What will be his entire commission?

7. A bookseller bought books at $12\frac{1}{2}$ per cent. discount from the retail price, which was \$2 per volume, and sold them at the retail price. What was his gain per cent?

8. For what sum must a note be drawn at 3 months to net \$150, after it is discounted at a bank at 6 per cent.?

9. How many barrels of water will a cylindrical cistern hold whose diameter on the bottom is 6 feet, and whose height is six feet?

10. How much more will it cost at \$1.35 a rod to fence a field in the form of a rectangle, 135 rods long and 60 rods wide, than to fence a field of equal area in the form of a square?

ARITHMETIC.

(From Milne's Standard Arithmetic.)

[First Grade Certificate.]

1. I have a lot in the form of a parallelogram containing one acre. The distance between two of its parallel sides is 12 rods. What is its length?

2. What will be the cost of a triangular piece of land whose base is 18.36 ch., and its altitude 10.54 ch., at \$70 per acre?

3. How many pounds of butter, at 24 cents a pound, must be given in exchange for 186 yards of muslin which is sold at the rate of 15 yards for a dollar?

4. C can dig a well in 25 days, and C and D in 15 days. How long will it take D to dig what remains after C has dug $\frac{1}{4}$ of it?

5. D, E, and F earned \$39.36; E earned three times as much as F, and D four times as much as E. How much did each earn?

6. What is the duty on 18 pieces of Brussels carpeting, of 60 yards each, invoiced at 45 cents per yard, the specific duty being 38 cents per yard and the ad valorem duty 35 per cent.?

7. What must be paid for stock which pays a dividend of 10 per cent. so as to realize 7 per cent. on the investment?

8. A board is 18 feet long, 20 inches wide at one end, and tapers gradually until it is only 1 foot wide at the other end. It is one inch thick. How many board feet does it contain?

9. At what time between 4 and 5 o'clock will the hands of a clock be exactly opposite?

10. A cubic foot of cast iron weighs 450 pounds. What is the weight of a cannon ball whose diameter is 18 inches?

ENGLISH GRAMMAR.

(From Mearns's English Grammar.)

[Second or Third Grade Certificate.]

1. (a) Define inflection; (b) case. (c) What does the apostrophe in the possessive case denote? (d) Decline child; (e) it.

2. Name five different inflections of nouns to denote the plural, and give two examples of each.

3. Name all the classes of pronouns and give two examples of each.

4. (a) Define comparison. (b and c) Compare: Able, dangerous, manly, evil. (d) Give two modal adverbs. (e) Give two correlative conjunctions.

5. (a) Define verb phrases. (b) Distinguish between complete and incomplete verbs. (c) Give a sentence using

be as a complete verb; (d) and one using *be* as an incomplete verb. (e) Give sentences using *fly* transitively and intransitively.

6. (a) Conjugate *see* in the passive voice, indicative mode, present, perfect tense. (b) Give the principal parts of the verbs *do*, *draw*, *go*, *lie* (to recline), and *blow*.

7. (a) Define the historical present. Give a sentence containing the infinitive used (b) as a noun; (c) as an adjective; (d) as an adverb. (e) Give a sentence containing a verbal adjective.

8. Give a sentence containing a clause used (a) as an adjective; (b) as an adverb; (c) as a noun. (d) Diagram: "'Tis only noble to be good."

9. Analyze the following sentence:

"For the structure that we raise
Time is with materials filled."

10. Parse in full all italicized words:

"*There* is a balm for those who weep."

"Do *what* you can."

"True worth is in *being*, not seeming."

"Give every man thine ear, but *few* thy voice."

"He came *home* Friday."

ENGLISH GRAMMAR.

(From Metcalf's English Grammar.)

[First Grade Certificate.]

1. (a) What is meant by the conjugation of a verb? (b) Give a complete synopsis of the verb *break* in the third person singular.

2. (a) Distinguish between the passive and progressive forms of the verb, and give an example of each. (b) Distinguish between the uses of the word *playing* in the following sentences:

(1) He is expert at playing ball.

(2) He is playing ball.

(3) The boy playing ball is ten years old.

3. (a) Define clause. (b) What are the three great classes of subordinate clauses? (c) Give examples of substantive clauses used in five different ways.

4. Give two sentences each containing a verbal adjective. Give three sentences each containing a verbal noun.

5. Analyze:

"His life was gentle, and the elements so mixed
in him, that nature might stand up and say
to the world, 'This is a man.'"

6. Parse in full all italicized words:

I dare *do all* that may become a man.

They do nothing except *complain*.

Education attempts to change *what* is into what ought to be.

7. Diagram;

(a) "They are sick that surfeit with too much, as they that starve with nothing."

(b) "Howe'er it be, it seems to me,
'Tis only noble to be good,"

8. (a) Define a phrase; (b) inflection; (c) expletive.

(d) Give sentences using *as* as four different parts of speech.

9. (a) Give the rule for forming the possessive case of nouns in both singular and plural. (b) Decline: Thou, it, man, bird.

10. Name every kind of pronoun, and give sentences illustrating the different kinds.

GEOGRAPHY.

(From Redway's Geography.)

{First, Second or Third Grade Certificate.}

1. Define soil; detritus; vapor; dew; rain.

2. Make an outline that you would follow in teaching one of the grand divisions of land.

3. Discuss Asia by your outline.

4. Name five of the most useful metals, and tell about their occurrence, mining, and uses.

5. In the eastern continent name the regions of very dense population.

6. Name the States of the United States and the countries of the Old World crossed by the 30th parallel of north latitude.

7. (1) Name the countries of Central America. (2) Discuss their government and productions. (3) Name the largest lake.

8. Make a list of the divisions and colonial possessions of the British Empire.

9. What route might a trading vessel follow, and what goods would it probably carry in making trips each way between (a) San Francisco and Venice; (b) Boston and Madras?

10. (a) Name in order, beginning at the north, all the counties of Florida bordering on the Gulf; (b) all bordering on the Atlantic; (c) all that have no sea coast.

COMPOSITION.

(From Swinton's New School Composition.)

{First, Second or Third Grade Certificate.}

1. Language expresses thought; what is the unit of language?

2. Combine the following statements into a simple sentence, and expand your sentence, making it first complex, then compound:

(a) Alexander saw himself lord of all Western Asia.

(b) He saw himself such at the age of twenty-five.

(c) He had defeated the Persians.

(d) They were defeated in the great battles of Issus, Granicus, and Arbela.

3. Combine the following statements into a compound sentence of two members, then contract it into a complex sentence:

(a) Augustus Caesar has been called a great prince.

(b) Louis XVI, of France, has been called a great prince.

(c) Deprive both of their crown.

(d) They will both dwindle into obscure and trivial characters.

4. Give the general rule for the position of modifiers in the sentence, and two rules, regarding modifiers, for the use of the comma.

5. (a) Change the following loose sentence to a period: We came to our journey's end, at last, with no small difficulty, after much fatigue, through deep roads and bad weather.

(b) Make one of your sentences in "2" periodic. (c) Which of your complex sentences in "3" is periodic? (d) Which kind of sentence, loose or periodic, should be cultivated by young writers, and why?

6. Explain the qualities, unity, clearness, and strength.

7. Write a sentence illustrating each quality, in which the quality shall be violated, then point out the fault and improve the sentence.

8. Explain the three qualities to be aimed at in the construction of paragraphs, namely: Unity of thought; continuity of sentences; variety of sentences.

9-10. Prepare a topical outline and write a composition of not less than 200 words, employing the various kinds of sentences mentioned above, and properly paragraphing and punctuating the same, on one of the following subjects:

(a) The Necessity for Industrial Education.

(b) The Effects of Politics Upon Public Education.

(c) Teachers' Summer Schools

PHYSIOLOGY.

(From Steele's Hygienic Physiology.)

[First, Second or Third Grade Certificate.]

1. Locate (a) the patella; (b) radius. Describe (c) the rickets; (c) St. Vitus' Dance; (e) synovia.
2. (a) What organs are under the control of the involuntary muscles? (b) Define fibrils; (c) muscular sense; (d) mucous membrane. (e) Why is the breast of a chicken white meat while that of a pigeon is dark?
3. Define (a) cutis; (b) dentine. (c) Why are scars white? (d, e) How should we care for the teeth?
4. Describe the respiratory system as to (a) the trachea; (b) vocal organs; (c) celia; (d) pleura; (e) need of air.
5. Explain fully what is meant by (a) plasma; (b) transfusion; (c) systole; (d) the pulse; (e) lesser circulation.
6. Name and describe each division of the alimentary canal.
7. Fully describe the nervous system.
8. Give a full description of the special senses.
9. What effect has alcohol and tobacco upon (a) digestion? (b) the skin? (c) the circulation? (d) the nervous system? (e) the connective tissue?
10. Give the five evil results attending rapid eating.

THEORY AND PRACTICE.

[Based on "Arnold's Waymarks."]

[First, Second or Third Grade Certificate.]

1. Make out an outline to be followed in giving a lesson to the First Reader class on the cat.
2. Give an outline of what should be taught on plants to the First, Second, and Third Grades.
3. What should be taught in the first three grades preparing for grammar?
4. How should the following be used: (a) Sight reading; (b) silent reading; (c) concert reading?
5. (a) Name three things to be learned in connection with every word. (b) Name four points to be noted by pupils in preparing a spelling lesson.
6. Discuss the use of pictures for language lessons.
7. (a) In reading what must necessarily precede the expression of the author's thought? (b) What kind of excellencies should the teacher commend in the child's work?
8. (a) How must all primary truths be attained by the child? (b) Show how this applies in arithmetic?
9. Name five kinds of seat work related to reading, five to arithmetic, and five to form or color work.
10. What is the immediate and what the all-important end in school discipline?

CIVIL GOVERNMENT.

(From Peterman's Elements of Civil Government.)

[First Grade Certificate.]

1. Discuss the civil district; its size, purposes, government, officers and their duties.
2. Name the officers usual in city governments, and state the duties of each.
3. Name the steps necessary for the admission of a State into the Union.
4. (a) Who are citizens of the United States? (b) Name six or more rights of citizens guaranteed in the Constitution.
5. (a) How is the membership of the House of Representatives apportioned? (b) How many members are there? (c) What is the term of office and salary of each? (d) Why should all bills raising revenue originate in the House?
6. (a) Under what circumstances would the House of Representatives elect a President of the United States? (b) Under what circumstances would the Secretary of Agriculture become President?
7. (a) The judicial system of the United States includes what courts? (b) What classes of suits at law fall under the jurisdiction of the United States court?
8. Define civil rights, industrial rights, and social rights.
9. (a) Why do laws exist? (b) What is liberty? (c) Name the kinds of law in existence.
10. (a) Discuss the origin and necessity of political parties. (b) Name the steps necessary to secure delegates to a National Convention.

ALGEBRA.

(From White's School Algebra.)

[First Grade Certificate.]

1. Define (a) coefficient; (b) reciprocal; (c) polynomial; (d) degree of a term; (e) quadratic equation.
2. Give the following laws of operation: (a) The commutative law; (b) the associative law; (c) the distributive law; (d) the exponent law.
3. Remove the signs of aggregation and combine in the following expression:

$$5x - \left\{ 5y - [x - (3z - 3y) + 2z - (5x - 2y - z)] \right\}.$$

4. Divide $\frac{1}{4}x^3 + \frac{1}{7}xy^2 + \frac{1}{12}y^3$ by $\frac{1}{2}x^2 - \frac{1}{3}xy + \frac{1}{4}y^2$.

5. Reduce to lowest terms the following:

$$\frac{2x^3 - 13x^2 + 23x - 12}{7x^3 - 33x^2 + 18x + 8}.$$

6. Reduce to its simplest form:

$$\left\{ \frac{m}{1+m} + \frac{1-m}{m} \right\} \div \left\{ \frac{m}{1+m} - \frac{1}{1-m^2} \right\}$$

7. A man engaged to work m days on the conditions that he was to receive a dollars for each day he worked, and forfeit b dollars for each day he was idle. At the end of m days he received n dollars. How many days had he worked?

8. If the numerator of a certain fraction be multiplied by 2 and the denominator increased by 2, the result will equal unity; but if the denominator be multiplied by 2 and the numerator increased by 3, the result will be equal to $\frac{1}{2}$. What is the fraction?

9. Multiply $2\sqrt{\frac{2}{3}} + 3\sqrt{\frac{1}{2}} + 1$ by $3\sqrt{\frac{1}{3}} - 2\sqrt{\frac{1}{2}}$.

10. The sum of the square of two numbers exceeds twice their product by 9; and the difference of their squares is 1 less than the product. Find the numbers.

PHYSICAL GEOGRAPHY.

(From Houston's New Physical Geography.)

[First Grade Certificate.]

1. (a) Enumerate the causes which produce the change of the seasons. (b) On what date and where could the sun be seen at midnight, and in what direction from the observer would it appear to be?

2. What changes are now going on in the earth's crust?

3. Discuss volcanoes: (a) Materials ejected; (b) causes of volcanic eruptions; (c) regions of volcanoes; (d) peculiarities of distribution.

4. (1) Classify springs as to: (a) Size of reservoir; (b) shape of reservoir; (c) depth of reservoir. (2) What are artesian wells?

5. (1) Discuss the origin of winds. (2) Define constant, periodical and variable winds.

6. (1) Distinguish between relative humidity and actual humidity, (2) Name three conditions under which rain may be caused.

7. Name three desert regions in the eastern continent and two in the western, and state the cause of each.

8. (1) Explain the origin of constant ocean currents. (2) Name four causes that influence the direction of currents.

9. (1) Distinguish between glaciers and icebergs. (2) Define three classes of moraines.

10. What arguments can be adduced to show the probable unity of the human race?

JUNE, 1900.

ORTHOGRAPHY.

(From Reed's Word Lessons.)

[First, Second or Third Grade Certificate.]

1. Unite the following words and suffixes, define the words formed, and give the rule of spelling that applies to each: Admire—ing, blame—able, move—ment, plague—ing, erase—ing, melody—ous, envy—able, greedy—ist, ceremony—al, tardy—ness.

2. Give five nouns, underscoring the suffix in each, the suffixes meaning respectively: Like, state of being, full of, continuing, able.

3. Give the rule for final e, and give six exceptions.

4. Syllabicate, and mark diacritically the vowels and accented syllable of the following: Equator, geysers, decimal, idiocy, decorous, suavity, timorous, athlete, troche, atheneum.

5. Define synonyms, homonyms, paronyms. Give the synonyms of the following in opposite columns: Speech, diction, judgment, danger, cautious. Give a homonym opposite the following: So, steal, pearl, load, route.

6. Discriminate between the synonyms: Frightful, tremendous, terrible, shocking, horrible, dreadful, fearful, awful.

7. Form a derivation by using each of the following as a prefix or suffix, and define each word formed: Age, ery, cule, dom, ful, ish, ity, ment, ness, post.

8-10. Write correctly: Co-al-ess, tar-rif, par-ra-graf, crit-eek, li-se-um, naw-she-a, jew-sy, kuv-et-us, ba-de-nazh, kol-ler (anger), sub-pe-na, sin-a-gog, min-yon-et, kris-a-lis, ti-a-lism.

READING.

[First, Second or Third Grade Certificate.]

1. Name the different methods of teaching reading. State your preference and your reasons for it.

2. Define pitch, tone, volume, cadence, accent.

3. Name the essential qualifications of a good teacher of reading.

4. What two ordinary school appliances does the scientific teacher of primary reading use more than chart or primer?

5. Give your views fully on supplementary reading.

6-8. Read a selection of prose.

9-10. Read a selection of poetry.

UNITED STATES HISTORY.

(From Field's U. S. Grammar School History and Green's Florida History.)

[Second or Third Grade Certificate.]

1. Sketch briefly Columbus' four voyages.
2. Tell what you know of Samuel Adams, John Hancock, James Otis, Patrick Henry and Benjamin Franklin.
3. Name the Presidents in regular order, underscoring those serving two terms.
4. Name five great expositions or fairs in the United States, and the date of each.
5. State facts relative to each of the following: Charles Cotesworth Pinckney, Sergeant Jasper, George Peabody, Blaine, Bryan, Schley, Clarke, Roberts, Taliaferro.
6. What is likely to be the issue between the Democratic and Republican parties this Presidential year?
7. Give a sketch of Ponce de Leon and his explorations in Florida. Also of Narvaez.
8. Give the Arbuthnot-Ambrister incident.
9. When did the United States acquire Florida; what was the consideration, and who was the first military governor?
10. Sketch the development of Florida for the past ten years, relative to its resources, industries and educational progress.

UNITED STATES HISTORY.

(From Field's U. S. Grammar School History and Green's Florida History.)

[First Grade Certificate.]

1. Why should history be taught in the public schools?
2. What European countries laid claim to North America, and upon what grounds?
3. Discuss briefly each of the following: Bacon's rebellion, Dorris rebellion, Hartford convention, Trent affair, Itata affair.
4. State facts relative to each of the following: Robert Morris, Nathan Hale, Lafitte, Charles Sumner, Elias Howe, George W. Childs, S. J. Tilden, Edison, Marconi, Thomas Lipton.
5. Tell what you know of the Venezuela incident.
6. From whom, how, and when did the United States obtain the following territory: Florida, Alaska, Hawaii, Puerto Rico, Philippines?
7. Discuss the Republic of Florida.
8. Sketch Weatherford, Osceola, Coacoochee, Wild Cat, Billy Bowlegs.
9. Discuss the phosphate discoveries, the Disston canal, the great freeze, the great hurricane, the filibustering expeditions.

10. Name and locate the State schools, universities and colleges of Florida.

ARITHMETIC.

(From Milne's Standard Arithmetic.)

[Second or Third Grade Certificate.]

1. $2\frac{1}{2} + 7\frac{3}{4} \times 3\frac{2}{5} - 2\frac{1}{3} \div 4\frac{1}{4} = ?$
2. A farmer engaged a man to work for him a year for \$216 and a suit of clothes. The man left at the end of 10 months and received \$175 and the suit of clothes; what was the value of the suit?
3. Divide 12 millionths by 12 thousandths.
4. When it is noon at Greenwich it is 6 hours, 52 minutes, 40 seconds, a. m., at Harrisburg, Pa. What is the longitude of Harrisburg?
5. How many yards of carpet 27 inches wide will be required for a room 18 feet long and 16 feet wide, if the strips run lengthwise and there is a waste of one-fifth of a yard in each strip in matching the pattern? What will be the cost of the carpet at \$1.85 per lineal yard?
6. A merchant's sales on Monday amounted to \$385.84. His sales on Monday were $16\frac{2}{3}$ per cent. of 54 per cent. less than the amount of goods sold on Tuesday. What was the amount of Tuesday's sales?
7. Mr. H. sold two houses for \$3,600 each; on one he gained 25 per cent., and on the other he lost 25 per cent. How much was gained or lost by the transaction?
8. A merchant sent his agent in St. Paul \$3,493.50 to invest in flour. The agent bought the flour at \$4.25 per barrel, and charged $2\frac{3}{4}$ per cent. commission. The merchant had the flour insured at $1\frac{1}{8}$ per cent., and paid \$268.25 for transportation. The flour was then sold at a gain of 10 per cent. on the whole cost. What was the selling price per barrel?
9. For what sum must a note for 2 months 17 days be made so that the proceeds after it has been discounted at bank at 7 per cent., may be \$895?
10. What is the volume of a frustum of a pyramid, the lower base of which is 20 feet square, the upper base 10 feet square, and the altitude 20 feet?

ARITHMETIC.

(From Milne's Standard Arithmetic.)

[First Grade Certificate.]

1. A horse cost \$125 and $\frac{4}{5}$ the cost of the horse is 4 times the cost of the harness. What did the harness cost?
2. A and B can do a piece of work in 12 days. If A can do only $\frac{3}{4}$ as much as B, how long will it take each of them to do the work?

3. A miner sold to a broker 2 pounds of gold dust at \$220 per pound, avoirdupois, and the broker sold it at \$16 per ounce, troy. Did he gain or lose, and how much?

4. A merchant was offered a credit of 3 months on a bill of goods amounting to \$3,468, or a discount of 2% for cash. How much better was the latter offer, money being worth 7%?

5. How much must be invested in 7% city bonds, bought at $101\frac{1}{2}$, brokerage $\frac{1}{8}\%$, to yield an annual income of \$840?

6. What was the list price of an article whose net cost was \$4.50, after deducting discounts of 40% and 10%?

7. How large a 60-day draft can be bought on St. Paul, Minn., for \$1,260, when the exchange is at $1\frac{1}{4}\%$ premium?

8. A lady has 2 silver cups, and only one cover for both. The first cup weighs 16 ounces, and when it is covered it weighs three times as much as the second cup; but when the second cup is covered it weighs four times as much as the first. What is the weight of the second cup and of the cover?

9. A room is 18 feet long, 15 feet wide and 9 feet high. What must be the length of a line extending from one of the lower corners to an opposite upper corner?

10. A man at his marriage agreed that if at his death he should leave only a daughter his wife should have $\frac{3}{4}$ of his estate; and if he should leave only a son, she should have $\frac{1}{4}$. He left a son and a daughter. What fractional part of the estate should each receive, and how much was each one's portion, if the estate was worth \$6,591?

ENGLISH GRAMMAR.

(From Metcalf's English Grammar.)

[Second or Third Grade Certificate.]

1. (1) What is grammar? (2) What is language? (3) What is a sentence? (4) Name and illustrate the two essential parts of a sentence. (5) What is analysis?

2. (1) What is a compellative? (2) Construct a sentence and give disposition of the compellative.

3. (1) Distinguish between a phrase and a clause, and construct a sentence and underscore a phrase and a clause.

4. Define all the parts of speech and give the properties belonging to each.

5. Define appositives and state how they are usually set off.

6. Decline: I, thou, goose, hanger-on, brother-in-law.

7. Define gender, person, number and case.

8. (1) Distinguish between transitive and intransitive verbs. (2) Tell how the passive voice is always formed, and what class of verbs may have a passive voice.

9. Construct five sentences each containing one of the following verbs, used first transitively and then intransitively: Fly, draw, taste, become, smile.

10. In the following quotation name the subject, all the clauses, stating what each modifies, and what kind of clause it is:

We, ignorant of ourselves,
Beg often our own harms, which the wise powers
Deny us for our good; so find we profit
By losing of our prayers.

Parse in full the following words in the above sentence: We, ignorant, beg, often, harms, which, so, find, losing, prayers.

ENGLISH GRAMMAR.

(From Metcalf's English Grammar.)

[First Grade Certificate.]

1. Give an example of three kinds of sentences: (1) When classified as to form; (2) when classified as to meaning.

2. Give the possessive singular and plural of the following nouns: Boy, s, clef, keynote, plaintiff, synecdoche, bridegroom, hypothesis, courtmartial.

3. Distinguish between the uses of *shall* and *will*.

4. Give the various uses of infinitives, and give the disposition of the infinitives in the following sentences:

He came to see me.
I told him to come home.

5. Construct two sentences, one containing a restrictive clause, the other a non-restrictive clause, and explain the punctuation.

6. Define noun clause, object complement, attribute complement, and write a sentence illustrating each.

7. Define conjunctive adverbs, and construct a sentence illustrating the same.

8. Distinguish between direct and indirect objects, and give a sentence to illustrate each.

9. Analyze the following sentence:

No radiant pearl which crested fortune wears,
No gem that twinkling hangs from beauty's ears,
Nor the bright stars which night's blue arch
adorn,
Nor rising suns that gild the vernal morn,
Shine with such lustre as the tear that flows
Down virtue's manly cheek for others' woes.

10. Parse in full the following words in the above sentence: No, pearl, fortune, that, twinkling, hangs, not, stars, adorn, nor, suns, that, gild, morn, shine, such, tear, down, cheek, woes.

GEOGRAPHY.

(From Redway's Geography.)

[First, Second or Third Grade Certificate.]

1. Define dunes, canyons, delta, bayou, glacier.
2. Name and locate the mountain systems of North and South America.
3. Write the countries of Europe in a column and opposite each its capital and form of government.
4. Compare the New England States with the Southern States as to general shape, extent, topography, industries, climate.
5. Name five of the most useful metals, where found and uses.
6. Define selvas, llanos, pampas, and state what these words suggest.
7. In what latitude are the Philippines? State what you know of the climate, the people, principal products and their worth strategically to the United States.
8. Trace a water route from Tampa to Honolulu; from Jacksonville to Iloilo; from Kissimmee to Key West.
9. Name all the railroads in the State; six principal towns in order as to population; six rivers in order as to size.
10. Make a list of the counties of Florida in a column with the county seats opposite.

COMPOSITION.

(From Swinton's New School Composition.)

[First, Second or Third Grade Certificate.]

1. Define composition, theme, essay.
2. Define simple, compound, and complex sentences. and illustrate each.
3. Define style; give four requisites of good style; define construction and give the qualities a sentence should possess.
4. Give six figures of speech and illustrate each. Distinguish between metonymy and synecdoche.
5. Define period; loose sentence. Give an instance of a loose sentence changed to a period.
- 6-10. Prepare a topical outline and write an essay of not less than 300 words on one of the following subjects:
 - (a) The Good and Evil of Novel Reading.
 - (b) Is the Town or the Country the More Appreciative of the Public Schools?

- (c) Should a Teacher be Allowed to Teach Longer Than One Year on a Third Grade Certificate?

PHYSIOLOGY.

(From Steele's Hygienic Physiology.)

[First, Second or Third Grade Certificate.]

1. Locate the fibula, scapula, ulna. What frequently causes curvature of the spine? What is a sprain?
2. Name all the bones of the head.
3. State fully the process of digestion.
4. Describe fully the structure of the skin, and give the theory of complexion.
5. Explain fully the process of hearing, naming all the parts of the ear.
6. Discuss ventilation, and tell how you would secure good ventilation in your school room.
7. Describe the eye, showing how we see.
8. Describe the circulation, giving a diagram of the heart.
9. Why do the Esquimaux eat whale blubber and other fats and the South Sea Islanders eat fruits and vegetables?
10. State the effects of tobacco and alcohol upon the system.

THEORY AND PRACTICE.

[Based on White's Pedagogy.]

[First, Second or Third Grade Certificate.]

1. Define intellect, knowledge, presentative powers, consciousness, attention.
2. Distinguish between induction and deduction, and upon what do they both depend?
3. Which powers are the most active in the young child, and which become the leading powers from fourteen to eighteen?
4. What are the ends and means of education; the ends of teaching?
5. (a) Which one of the author's "Principles" on teaching is axiomatic? (b) Under "Principle II" give the natural order in which the powers of the mind should be exercised and the corresponding kinds of knowledge taught. (c) Under "Principle IV" what serious mistake do teachers often make? (d) What is said about "object teaching"?
6. What is essential in leading the pupil to form correct ideals? What caution to teachers in their presentation of a truth is here implied?

7. What is the function of the drill? How is it often abused? What is the relation of test to study? How may it be abused?

8. Give three merits of the "question method." Name two defects. What about questions that admit of "yes and no" answers. Give some merits of the "topic method." Discuss questioning as an art.

9. Give your opinion on written examinations. Should the results of written examinations be made the basis for promotion?

10. What should the teacher's preparation include? What is said about use of text books? What about the principles to be observed and the methods to be used? What about assignment of lessons? Make a program of the day's work.

CIVIL GOVERNMENT.

(From Townsend's Shorter Course.)

[First Grade Certificate.]

1. State the good to be derived from teaching Civil Government in the public schools.

2. Define government and show how you would convey to the mind of the child the necessity thereof.

3. Name the three branches of government, and give your reason why they should be kept as separate as possible.

4. How are the members of each house of Congress chosen? What bills must originate in the lower house and why is this?

5. What are taxes? Why is it necessary for the United States to borrow money? Can the government lend money to individuals?

6. What are letters of marque and reprisal?

7. Define a bill and tell how it becomes a law. Trace it from the time it is drawn until it receives the President's approval.

8. Give a full explanation of a writ of habeas corpus. When may it be suspended and why?

9. Describe in full the method of nominating a presidential candidate.

10. Give both methods of electing a President.

ALGEBRA.

(From White's School Algebra.)

[First Grade Certificate.]

1. Define co-efficient, exponent, equation, radical, surd.

2. Divide $x^5 - 26x^3 + 6x^2 + 5x - 1$ by $x^3 - 5x^2 + 1$.

3. Factor $x^2 + (a-c)x - ac$.

$$\frac{x}{m} + \frac{y}{n} = 2$$

4. Solve the equation, $\frac{x}{n} - \frac{y}{m} = 1$

5. A certain number expressed by 2 digits is equal to four times the sum of those digits; but, if 18 be added to the number, the digits will be reversed. Find the number.

6. $(2a^2 + b - c)^3 = ?$ (write out according to binomial theorem.)

7. Find the cube root of $a^6 + 3a^5 + 6a^4 + 7a^3 + 6a^2 + 3a + 1$.

8. Solve the equation, $18x^2 - 27x - 26 = 0$.

9. Find three numbers such that the second will be one-half of the first, and the third one-third of the first, and the sum of their squares will be 441.

10. Solve the equation,

$$3x^2 - 7y^2 + 1 = 0$$

$$xy = 6$$

PHYSICAL GEOGRAPHY.

(From Houston's New Physical Geography.)

[First Grade Certificate.]

1. Of what does Physical Geography treat?

2. Define a sidereal year; a tropical year. Which value is generally taken for the length of the civil year?

3. Give Laplace's nebular hypothesis. Give the causes which produce the change of seasons.

4. Define volcano, tufa, solfataras, cause of earthquakes, dykes.

5. Define Archæan time, Palæozoic time, Mesozoic time, Cenozoic time.

6. Discuss the theory of the formation of coal; the theory of coral islands.

7. Define climate, and enumerate the circumstances which influence the climate of a country.

8. Define tides, and state why the moon, which is so much smaller than the sun, should exert a more powerful influence in producing tides.

9. Define isogonal lines; isoclinal lines. Distinguish between isoclinal and isothermal lines.

10. Give the characteristics of the temperate fauna, naming the principal carnivora and herbivora.

LIBRARY OF CONGRESS



0 019 741 185 5